UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION II
NEW YORK, NEW YORK 10007

SEP 28 2015

ACTION MEMORANDUM – RV2

SUBJECT: Request for Approval of a Removal Action, Ceiling Increase and 12-Month Exemption at the Former Kil-Tone Company Site, Vineland, Cumberland County, New Jersey

FROM: Kimberly Staiger, On-Scene Coordinator
Removal Action Branch

TO: Walter E. Mugdan, Director
Emergency and Remedial Response Division

THRU: Joseph D. Rotola, Chief
Removal Action Branch

Site ID: **A24N**

I. PURPOSE

The purpose of this Action Memorandum is to request and document approval of the proposed removal action (RV2), ceiling increase and 12-Month exemption for the Former Kil-Tone Company Site ("Site"), located in Vineland, Cumberland County, New Jersey. This is the second removal action undertaken by the United States Environmental Protection Agency ("EPA") at this Site. The previous removal action (RV1) is described in the Action Memorandum dated August 10, 2015. The RV2 removal action will address the threats posed by lead and arsenic contaminated soil on residential properties located close to or adjacent to the Site property.

The previous ceiling authorized for the RV1 removal action taken at this Site was $200,000, of which $150,000 was for mitigation contracting. The estimated cost of the RV2 removal action proposed in this Action Memorandum is $1,719,000, of which $1,345,000 is for mitigation contracting. If approved, the total project ceiling will be increased to $1,919,000, of which $1,495,000 is for mitigation contracting.

Conditions at the Site meet the criteria for a removal action under the Comprehensive Environmental Resource, Compensation and Liability Act ("CERCLA") and Section 300.415(b) of the National Contingency Plan ("NCP"), 40 C.F.R. §300.415(b).

There are no nationally significant or precedent setting issues associated with this removal action.

II. SITE CONDITIONS AND BACKGROUND

The EPA Superfund Enterprise Management System Identification Number for this time critical removal action is NJN000201303.

A. Site Description

1. Removal Site Evaluation ("RSE")

The US EPA received a referral from the New Jersey Department of Environmental Protection ("NJDEP") on November 14, 2014 to assess the Former Kil-Tone Company Site located at 527 East Chestnut Avenue, Vineland, New Jersey for a CERCLA removal action. The NJDEP referral included the former Kil-Tone Company property, nearby residential properties, and the LERCO property. LERCO, a former fuel distribution facility, is situated across Chestnut Avenue from the former Kil-Tone Company property, and has been a fuel distribution facility since the 1930s. Remedial work to address petroleum related constituents in soil and groundwater has been performed on the LERCO property under the NJDEP Licensed Site Remediation Program ("LSRP"). Elevated levels of arsenic and lead are present in the soil and groundwater at the property, with arsenic concentrations as high as 20,000 ppm and lead levels as high as 28,700 ppm found in the soils at depth (4' depth). LERCO has asserted that the contamination on their property is attributed to the historic pesticide manufacturing operations of the Kil-Tone Company.

The Kil-Tone Company manufactured arsenical pesticides from the late 1910s until the late 1930s. Specific compounds manufactured at the Site included copper lime calcium arsenate dust, lead arsenate and Paris Green.

NJDEP initiated a sampling event in August 2014 at the former Kil-Tone Co. property and the surrounding residential properties to determine if the properties are impacted by historic operations at the Kil-Tone Co. Soil samples were collected from a total of twelve residential properties, three vacant properties and 3 commercial properties, including the former Kil-Tone Company property itself. Groundwater samples were collected from temporary well points installed on the properties sampled, and sediment and surface water samples were collected from within the Tarkiln Branch. Arsenic and lead were detected in the top 6" of soil at residential properties at concentrations as high as 83 ppm and 1,100 ppm, respectively.

In January and February 2015, the EPA conducted soil sampling at 27 residential properties located closest to the Former Kil-Tone Site property. Several soil borings were installed across each property, and soil samples were collected from the following 4 depth intervals within each

boring: 0-2", 2-6", 6-12", and 12-24" below ground surface ("b.g.s."). Elevated concentrations of lead and arsenic exceeding the EPA Residential Removal Management Levels ("RML") of 67 ppm for arsenic and 400 ppm for lead are present in the top two feet of soils at 19 of the 27 residential properties sampled.

Background soil samples were collected from several public lands in Vineland including Landis Park located at 600 East Park Avenue, South Vineland Park located at 429 West Elmer Road, and the Vineland Cemetery located on South Delsea Drive. Two soil borings were installed at each background location, and soil samples were collected from 4 depth intervals: 0-2", 2-6", 6-12" and 12-24" b.g.s. All soil samples collected in the background locations had concentrations of arsenic less than 67 mg/kg and lead less than 400 mg/kg. The highest concentrations of arsenic (6.4 mg/kg) and lead (57 mg/kg) were detected in Landis Park in the 0-2" depth interval.

Analytical results indicate the presence of elevated concentrations of lead and arsenic exceeding the EPA Residential RML on 19 residential properties. Concentrations of arsenic ranged from 3 mg/kg to 1,000 mg/kg with the highest concentration detected in the 2-6" depth interval. Concentrations of lead ranged from 13 mg/kg to 2,000 mg/kg with the highest concentration detected in the 6-12" depth interval.

Figures depicting sampling locations on the neighboring residential properties are included in Attachment B. Tables containing the lab results are included in Attachment C. The NJDEP referral is included in Attachment D.

2. Physical location

The Kil-Tone Company was located at 527 East Chestnut Avenue, Vineland, New Jersey 08360-5620 (Block 4901, Lot 1). The Site includes the location of the former Kil-Tone Company and the additional residential properties nearby impacted by the extent of contamination. A map indicating the impacted residential properties identified thus far is included in Attachment A.

The Site is located in a mixed use residential/commercial/light industrial neighborhood of Vineland, New Jersey. The Site is bounded to the north by East Cherry Street, to the south by Paul Street, to the east by South Sixth Street and to the west by South East Boulevard. The nearest residential property to the Site property sits immediately adjacent the property to the east. The Third Street Complex, a public park funded by NJDEP Green Acres, is located less than 0.25 miles west of the Site on East Chestnut Avenue, and the Gloria M. Sabater Elementary School is located 0.25 miles north of the Site on Almond Street.

3. Site characteristics

The Site property is currently owned by Urban Manufacturing LLC, a holding company with Urban Sign & Cranes, Inc. as a tenant. Urban Sign & Crane, Inc. fabricates and installs commercial signage. Operations are conducted within the building, with the outside portions of the lot used for storage of equipment and vehicles. A large portion of the property is unpaved, with poorly maintained asphalt paving located around the eastern and northern perimeter of the property.

The LERCO property is currently vacant and mostly unpaved with rock/gravel covering the unpaved areas. The property is an active LSRP site with NJDEP oversight, but has been included in the State referral. No soil samples have been collected in the top 6" of soil present on this property. In 2013, the LSRP for the LERCO property installed a one foot soil/asphalt cap on the property to prevent direct contact with metals contamination present in the soils.

The residential area immediately surrounding the former Kil-Tone Company property are mostly older structures constructed in the early 1900s. The majority of the properties are single family homes or duplexes that have been converted into tenant-occupied apartment buildings. Approximately 75% of the residents in a one block radius of the Site speak Spanish in the home.

The City of Vineland is 69 square miles and is the largest city in area within the State of New Jersey. As of the 2010 Census, the city had a population of 60,724, with 32% of the population speaking a language other than English at home.

The removal action documented in this Action Memorandum will be the second CERCLA removal action undertaken at the Site.

4. Release or threatened release into the environment of a hazardous substance, or pollutant, or contaminant

The Site is a "facility" as defined in Section 101(9) of CERCLA, 42 U.S.C. § 9601(9). Hazardous substances, pollutants, or contaminants present at the Site represent a threat to the public health and welfare as defined by Section 300.415(b)(2) of the NCP, in that there is a potential human exposure at the Site via inhalation, ingestion, and/or direct human contact.

Sampling and analysis conducted at the Site identified the presence of elevated concentrations of arsenic and lead. Arsenic and lead are CERCLA hazardous substances as defined in Section 101(14) of CERCLA, 42 U.S.C. § 9601(14) and listed in 40 CFR Part 302.4.

HAZARDOUS SUBSTANCE	STATUTORY SOURCE FOR DESIGNATION AS A HAZARDOUS SUBSTANCE UNDER CERCLA
Lead	1,2
Arsenic	1,2

1. Clean Water Act, Section 307(a)
2. Clean Air Act, Section 112

The mechanism for past releases were from improper management of waste on the Site which spread to the surrounding residential properties. The threat of future releases from the Site exist through the spread of soil contamination through surface water run-off, windblown dust and/or human tracking.

5. National Priorities List ("NPL") status

The Site is currently being evaluated for inclusion on the NPL.

6. Maps, pictures, and other graphic representations

A Site location map and sampling location maps have been included in Attachments A and B. A copy of the analytical results tables are provided in Attachment C. The sampling location maps for the NJDEP August 2014 sampling event are provided in Attachment D.

B. Other Actions to Date

1. Previous actions

The Site was referred to the EPA by the NJDEP on November 14, 2014. There have been no other removal activities taken by other government or private parties on the residential properties prior to this request.

An emergency removal action RV1 was initiated on the Site property located at 527 East Chestnut Avenue on July 1, 2015 to address a pressurized fire suppression line that was punctured during the EPA subsurface soil investigation.

The RV1 removal action consisted of excavating soils to expose the pipe break and make the necessary repairs to restore fire suppression to the facility and to address the release of hazardous materials into the storm sewer located at the northwestern corner of the Site property. EPA has expended approximately $50,000 in mitigation costs for the RV1 action which was effective in mitigating the spread of contaminated soil as the result of the water line break. The RV1 action is ongoing.

2. Current actions

Repairs to the broken pipe were completed on July 3, 2015. Waste generated from the emergency removal action are currently staged on Site awaiting transportation and disposal. Additional activity may be required to repair other subsurface utilities which may have been impacted by the sampling on the former Kil-Tone property.

C. State and Local Authorities' role

1. State and local actions to date

Elevated concentrations of arsenic and lead were detected in post-excavation soil samples collected following the decommissioning and removal of four underground storage tanks on the LERCO property in 1993. In 1995, the LERCO property entered the NJDEP Industrial Site Recovery Act ("ISRA") Program, now the LSRP Program, to address all environmental contamination on the property, including the elevated arsenic and lead found in the soil and groundwater beneath the property. Remediation activities to address petroleum hydrocarbons associated with the fuel distribution operations have been conducted on the property with NJDEP oversight. A 1-foot soil/asphalt cap has been installed on the LERCO property to prevent contact with the underlying metals contamination in the soil.

In August 2014, the NJDEP performed soil sampling at properties located within a one block radius of the Site property to determine if metals contamination associated with historic operations was present in the soil above the NJDEP's Soil Cleanup Criteria. Elevated levels of arsenic were found at 12 of the commercial and residential properties above the state cleanup standards. Elevated lead contamination was found in soil at six residential and commercial properties. Based upon the NJDEP investigation, the Site was referred to the EPA on November 14, 2014.

Currently, the New Jersey Department of Health and the City of Vineland Health Department, with assistance from the Agency for Toxic Substances and Disease Registry, are conducting community outreach and providing public health education to the residents living in properties that have elevated arsenic and lead soil contamination.

2. Potential for continued State/local response

There are no actions planned or being taken by State or local government agencies to mitigate the hazardous substances present on-site. These organizations will act in a supporting role throughout the RV2 removal action.

III. THREATS TO PUBLIC HEALTH, OR WELFARE, OR THE ENVIRONMENT AND STUATORY AND REGULATORY AUTHORITIES

As a result of the release and potential for continued release of arsenic and lead to the environment, having considered the factors contained in 40 C.F.R. Section 300.415(b)(2)(i) through (vii), EPA has concluded that the conditions at the Site meet the criteria for a CERCLA removal action as described in the NCP. Specifically, the following factors support conducting a removal action at the Site:

1) Actual or potential exposure to nearby human populations or the food chain from hazardous substances, or pollutants, or contaminants [300.415(b)(2)(i)];

2) High levels of hazardous substances or pollutants or contaminants in soils largely at or near the surface that may migrate [300.415(b)(2)(iv)];

3) Weather conditions exist that may cause hazardous substances, or pollutants, or contaminants to migrate or be released [300.415(b)(2)(v)]; and

4) The availability of other appropriate Federal or State response mechanisms to respond to the release [300.415(b)(2)(vii)].

Actual or potential exposure to nearby human populations, animals, or the food chain from hazardous substances, or pollutants, or contaminants;

The presence of arsenic and lead at the residential properties poses a significant risk to human health due to the potential for contact with and ingestion of arsenic and lead contaminated soils by residents, especially children. Preschool children who come in contact with elevated levels of

lead in soil might be exposed to small amounts of lead by accidentally swallowing soil and dust that clings to their hands. Lead exposure may cause serious adverse health effects, particularly in young children. Young children and fetuses are especially sensitive to the toxic effects of lead exposure. Long-term exposure can increase blood lead levels in children and may cause a decrease in IQ, a decrease in hearing and changes in enzyme function in the blood. Lead is a cumulative poison where increasing amounts can build up in the body eventually reaching a point where symptoms and disability occur. Symptoms include decreased physical fitness, fatigue, sleep disturbance, aching bones, abdominal pains and decreased appetite. Lead is a powerful systemic poison. Ingestion and inhalation of large amounts can lead to seizures, coma, and death. Long-term exposure can result in severe damage to the brain, blood-forming organs, and the nervous, urinary, and reproductive systems.

In addition, indoor residential contamination could result from foot traffic on and through soils containing elevated levels of arsenic and lead. The potential for increased exposure to arsenic and lead exists when residents perform yard maintenance, or garden, especially in areas with bare soil.

High levels of hazardous substances, or pollutants, or contaminants in soils largely at or near the surface that may migrate;

Analytical data indicates that elevated levels of arsenic and lead are present in the top two feet of soil on residential properties adjacent the Site. The soil on the properties can potentially become airborne and/or migrate when disturbed under dry conditions; and may migrate during heavy rain events.

The relationship between soil lead concentrations and the consequent impact on blood lead levels in children has been studied through numerous epidemiological studies. Based on these epidemiological studies, it is generally believed that persistent exposure to soil-borne lead results in an increase in blood lead levels (in children) of 1-9 ug/dl per 1,000 ppm lead in soil. This relationship may become less robust as exposure durations decrease and soil lead levels increase.

Weather conditions exist that may cause hazardous substances, or pollutants, or contaminants to migrate or be released; and

Elevated levels of arsenic and lead are present in the top two feet of soil on residential properties adjacent the Site. Soil on the residential properties may potentially become airborne and/or migrate when disturbed under dry conditions; and may migrate off-site during heavy rain events.

The availability of other appropriate federal or State response mechanisms to respond to the release.

The State of New Jersey is not currently able to take timely and appropriate action to respond to the threat posed by the presence of hazardous substances at the Site.

IV. ENDANGERMENT DETERMINATION

Actual or threatened releases of hazardous substances from this Site, if not addressed by implementing the response action selected in this Action Memorandum, may present an imminent and substantial endangerment to public health, or welfare, or the environment.

V. EXEMPTION FROM STATUTORY LIMITS

Completion of the planned removal action will exceed the 12-month statutory limitation for removal actions. The threat to human health or the environment posed by the contamination found at the Site warrants a 12-month exemption based on the following factors:

A. Emergency Exemption

1. There is an immediate risk to public health, or welfare, or the environment.

Response actions beyond 12 months will be required to complete the necessary removal actions to mitigate the threats posed by the Site. Conditions at the Site and the proposed actions meet the criteria for an emergency exemption as specified in CERCLA Section 104(c). There are immediate risks to public health and the environment, and continued response actions are immediately required to prevent, limit or mitigate the release or threat of release of hazardous substances at the Site. The arsenic and lead contamination identified at this Site will continue to pose an immediate threat to residents and visitors of the impacted properties. Weather conditions will also contribute to the immediate threats posed by the arsenic and lead contamination. Neither the State, nor local government can provide assistance on a timely basis.

2. Continued response actions are immediately required to prevent, limit, or mitigate an emergency.

The risk to public health posed by the arsenic and lead contamination in soil on the residential properties requires an immediate mitigation action. The concentrations of these hazardous substances in soil exceed the established EPA RML guidelines. Once the planned mitigation activities are initiated, they must continue un-interrupted until completion, to prevent a continued risk of direct contact exposure.

3. Assistance will not otherwise be provided on a timely basis.

Other federal, state, or local response mechanisms and resources are not available to respond to the release and/or threat of release of hazardous substances from the Site. Both the State and local government lack the necessary resources to perform a response at the Site.

VI. PROPOSED ACTIONS AND ESTIMATED COSTS

A. Proposed Actions

1. Proposed Action Description

The objective of the removal action is to prevent the human exposure to arsenic and lead on at least 18 residential properties. Human exposure may occur through direct dermal contact with, and incidental ingestion of, soil. The residential properties that are subject to this removal action are located on South East Boulevard, East Cherry Street, South Sixth Street, and East Chestnut Avenue. Additional properties requiring mitigation may be identified during the course of the removal action.

A figure depicting the 18 known residential properties to be addressed under this removal action are included in Attachment A.

The following activities will be conducted to achieve the removal action objectives:

i. Conduct a landscape inventory of all 18 residential properties and document existing conditions prior to removal activities;

ii. Review existing property sketches to confirm the location of features that may be disturbed by the removal action;

iii. Removal of any yard debris and landscape as necessary to complete the removal action;

iv. Place up to 6” of top soil, or other barriers effective in reducing direct contact, on the residential properties identified with elevated arsenic and lead concentrations within the surface soils;

v. Evaluate cost effectiveness and achievement of public health protection of contaminated soil removal within 2-feet of the surface vs. covering with 6-inches of top soil or other protective barrier. Implement contaminated soil excavation and disposal as appropriate;

vi. Conduct perimeter air monitoring for particulates during any earth moving activities to determine the effectiveness of dust suppression;

vii. Restoration and landscaping of the impacted areas; and

viii. Characterize and dispose of any wastes generated during the removal action. All wastes will be transported off-site for disposal at a facility that complies with the EPA Off-Site Rule.

EPA will continue to monitor the soil cap as part of the post-removal site control measures ("PRSC"). The PRSC measures will continue until a long term plan to mitigate the threats posed by this material is implemented.

2. Contribution to Remedial Performance

The planned removal action is consistent with the requirement of Section 104(a)(2) of CERCLA, which states, "any removal action undertaken.. . .should. . .to the extent practicable, contribute to the efficient performance of any long-term remedial action with respect to the release or the threatened release concerned." The planned removal actions are consistent with any future remedial action in that they are mitigating the threat of direct contact with contaminated soil.

3. Engineering Evaluation/Cost Analysis ("EE/CA")

Due to the time-critical nature of this removal action, an EE/CA will not be prepared.

4. Applicable or Relevant and Appropriate Requirements ("ARARs")

ARARs within the scope of the project, including CERCLA, RCRA, and Department of Transportation regulations that pertain to the transportation and disposal of contaminated materials, including hazardous substances and hazardous wastes, will be complied with to the fullest extent practicable.

5. Project Schedule

The proposed removal activities can be initiated within 30 days of approval of this Action Memorandum, weather dependent.

Although the installation of the soil cap on the residential properties is expected to be completed within four months of the start of construction, the installation could take up to nine months to complete should the work be delayed due to weather conditions or access issues.

Maintenance of the soil barrier will continue until a permanent remedial action can be implemented on the residential properties. The timeline to complete a remedial action on the residential properties has not been established.

Should soil removal and disposal be determined to be cost effective and protective, this work could take up to 24 months to complete and takes into account a seven month construction season and a one year maintenance program to address issues associated with restoration.

B. Estimated Costs

A summary of estimated costs for the action is presented below. A detailed confidential Independent Government Cost Estimate is provided in Attachment D.

Direct Extramural Costs	Total Funding Authorized for RV1	Additional Funding Requested for This Action	Total Funding
Regional Allowance Costs (Total ERRS clean-up contractor including labor, equipment and materials)	$150,000	$1,345,000	$1,495,000
Total RST 2 Costs	$15,000	$150,000	$165,000
Subtotal, Extramural Costs	$165,000	$1,495,000	$1,660,000
Extramural Cost Contingency	$35,000	$224,000	$259,000
Total Direct Extramural Costs	$200,000	$1,719,000	$1,919,000

VII. EXPECTED CHANGE IN THE SITATION SHOULD ACTION BE DELAYED OR NOT TAKEN

Should the proposed actions described in this Action Memorandum not be implemented; the exposure threats posed by the lead and arsenic will persist. Arsenic and lead levels in soils at or near the surface of the residential properties present the potential for migration to further contaminate the environment and pose a threat to nearby residents.

VIII. OUTSTANDING POLICY ISSUES

There are no known outstanding policy issues associated with this Site at the present time.

IX. ENFORCEMENT

Efforts to identify Potentially Responsible Parties ("PRPs") are on-going. To date, EPA has not identified any PRPs that are capable of performing the proposed removal action.

ENFORCEMENT COST ESTMATE

Based upon full-cost accounting practices, the total EPA cost that will be eligible for cost recovery is estimated to be $3,001,245 and was calculated as follows:

COST CATEGORY	AMOUNT
Direct Extramural Cost	$1,919,000
Direct Intramural Cost	$250,000
Subtotal Direct Costs	$2,169,000
Indirect costs (Indirect Regional Cost Rate 38.37%)	$832,245
Estimated EPA Costs eligible for Cost Recovery	$3,001,245

Note: Direct Costs include direct extramural costs and direct intramural costs. Indirect costs are calculated based on an estimated indirect cost rate expressed as a percentage of Site-specific direct costs, consistent with the full cost accounting methodology effective October 2, 2000. These estimates do not include pre-judgment interest, do not take into account other enforcement costs, including Department of Justice costs, and may be adjusted during the course of a removal action. The estimates are for illustrative purposes only and their use is not intended to create any rights for responsible parties. Neither the lack of a total cost estimate nor deviation of actual total costs from this estimate will affect the United States' right to cost recovery.

X. RECOMMENDATION

This decision document represents the selected removal action for the residential properties portion of the Former Kil-Tone Company Site located in Vineland, Cumberland County, New Jersey. This document has been developed in accordance with CERCLA and is not inconsistent with the NCP. This decision is based on the administrative record for the Site.

Conditions at the Site meet the NCP Section 300.415(b) criteria for a removal action, ceiling increase, and the CERCLA Section104(c) criteria for an emergency exemption to the 12-month statutory limitation. The previous ceiling authorized for the RV1 removal action taken at this Site was $200,000, of which $150,000 was for mitigation contracting. The estimated cost of the RV2 removal action proposed in this Action Memorandum is $1,719,000, of which $1,345,000 is for mitigation contracting. If approved, the total project ceiling will be increased to $1,919,000, of which $1,495,000 is for mitigation contracting.

There are sufficient monies in the Advice of Allowance to fund the project.

Please indicate your formal authorization for the removal action, ceiling increase and 12-month exemption at the Former Kil-Tone Company Site, as per current Delegation of Authority, by signing below.

APPROVAL: _____ **DATE:** 9/28/2015

Walter E. Mugdan, Director
Emergency and Remedial Response Division

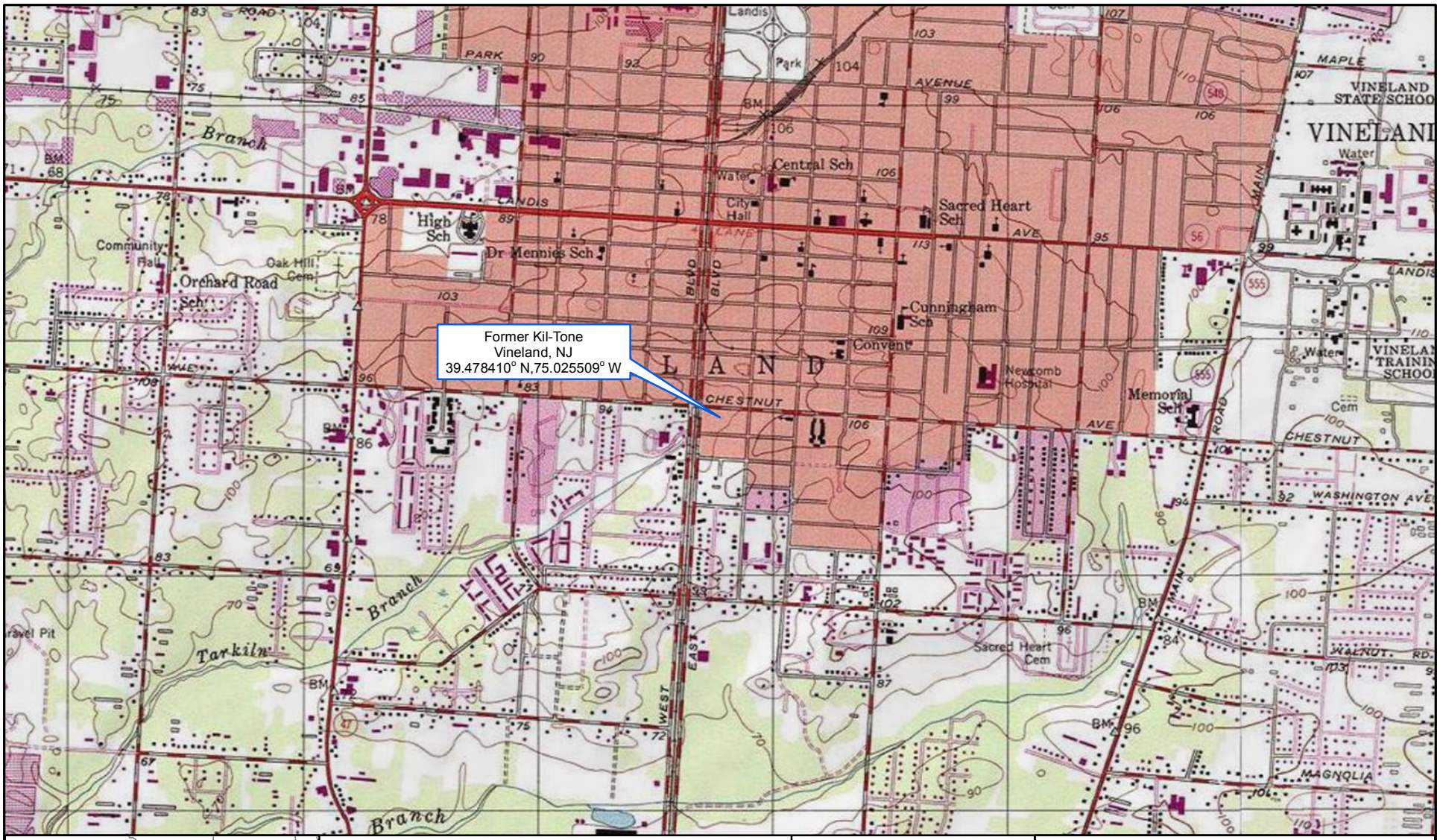
DISAPPROVAL: _____ **DATE:** _____

Walter E. Mugdan, Director
Emergency and Remedial Response Division

cc: W. Mugdan, ERRD-D
A. Carpenter, ERRD-ADD
J. Rotola, ERRD-RAB
E. Wilson, ERRD-RAB
B. Grealish, ERRD-RAB
G. DeAngelis, ERRD-RAB
C. Petersen, ERRD-NJRB
J. Desir, ERRD-SPB
M. Hauptman, ERRD-SPB
K. Giacobbe, OPM-GCMB
D. Mellott, ORC-NJSFB
J. Fajardo, ORC-NJSB
M. Fiore, OIG
M. Mears, PAD
T. Grier, 5202G
F. Mumford, NJDEP
L. Rosman, NOAA
A. Raddant, USDOI
R. Bermudez, City of Vineland
R. Tonetton, City of Vineland
D. Jones, City of Vineland
B. Davis, Urban Manufacturing, LLC.
S. Davis, Urban Sign & Crane

ATTACHMENT A

Site Map


Former Kil-Tone
Vineland, NJ
39.478410° N,75.025509° W
Landis
Park
PARK
AVENUE
MAPLE
VINELAND STATE SCHOO
VINELAND
Water
Central Sch
City Hall
Sacred Heart Sch
MAIN
LANDIS AVE
High Sch
Dr Mennies Sch
Community Hall
Oak Hill Cem
Orchard Road Sch
BLVD
Cunningham Sch
Convent
Newcomb Hospital
Memorial Sch
CHESTNUT
Cem
WASHINGTON AVE
Branch
Tarkiln
Sacred Heart Cem
WEST
EAST
WALNUT
MAGNOLIA
Gravel Pit
NY
CT
RI
PA
MD
DE
VA
Cumberland County
Sources:
USGS 7.5 Minute Topographic Quadrangle Maps:
Millville, NJ 1997 & Five Points, NJ 1994
EPA Contract No.: EP-S5-13-01
TDD No.: S05-0010-1501-400
N
1,000
0
1,000
Feet
Former Kil-Tone Site Removal Assessment
Figure 1
Site Location
TETRA TECH
Prepared For: joesph.gawarzewski
Prepared By: joel.peters
File Path: S:\CADD\ll902600001S05150140O\mxd\FIG_1_Vineland_Site_Location_011915.mxd
Date Saved: 1/19/2015
Coordinate System: NAD 1983 UTM Zone 18NTransverse Mercator

Former Kil-Tone Company Site

Residential Properties included in this Action Memorandum highlighted red

ATTACHMENT B
Sample Maps and Results

Legend

- Sampling/Borehole Location
- Sampled Parcel

Depth = Inches Below Ground Surface (BGS)
As = Arsenic
Pb = Lead
<LOD = Below Level of Detection
ppm = parts per million

Source: Cumberland County Department of Planning and Development, NJ Office of Information Technology (NJOIT), Office of Geographic Information Systems (OGIS), 2011, and Bing Maps Aerial Imagery, 2010-2011.

EPA Contract No.: EP-S5-13-01 TDD No.: S05-0010-1501-400

Former Kil-Tone Site Removal Assessment
Vineland, New Jersey

Arsenic and Lead Fixed Lab Results

Station Location ID: 001

TETRA TECH

Prepared For: joseph.gawarzewski | Prepared By: joel.peters

Coordinate System: NAD 1983 StatePlane New Jersey FIPS 2900 Feet Projection: Transverse Mercator Datum: North American 1983 Units: Feet US

File Path: S:\CADD\I\9026\0001\S05\501400\mxd\Fixed_PB_AS\FIG_X_001_Vineland_710_S_6th_DESA.mxd

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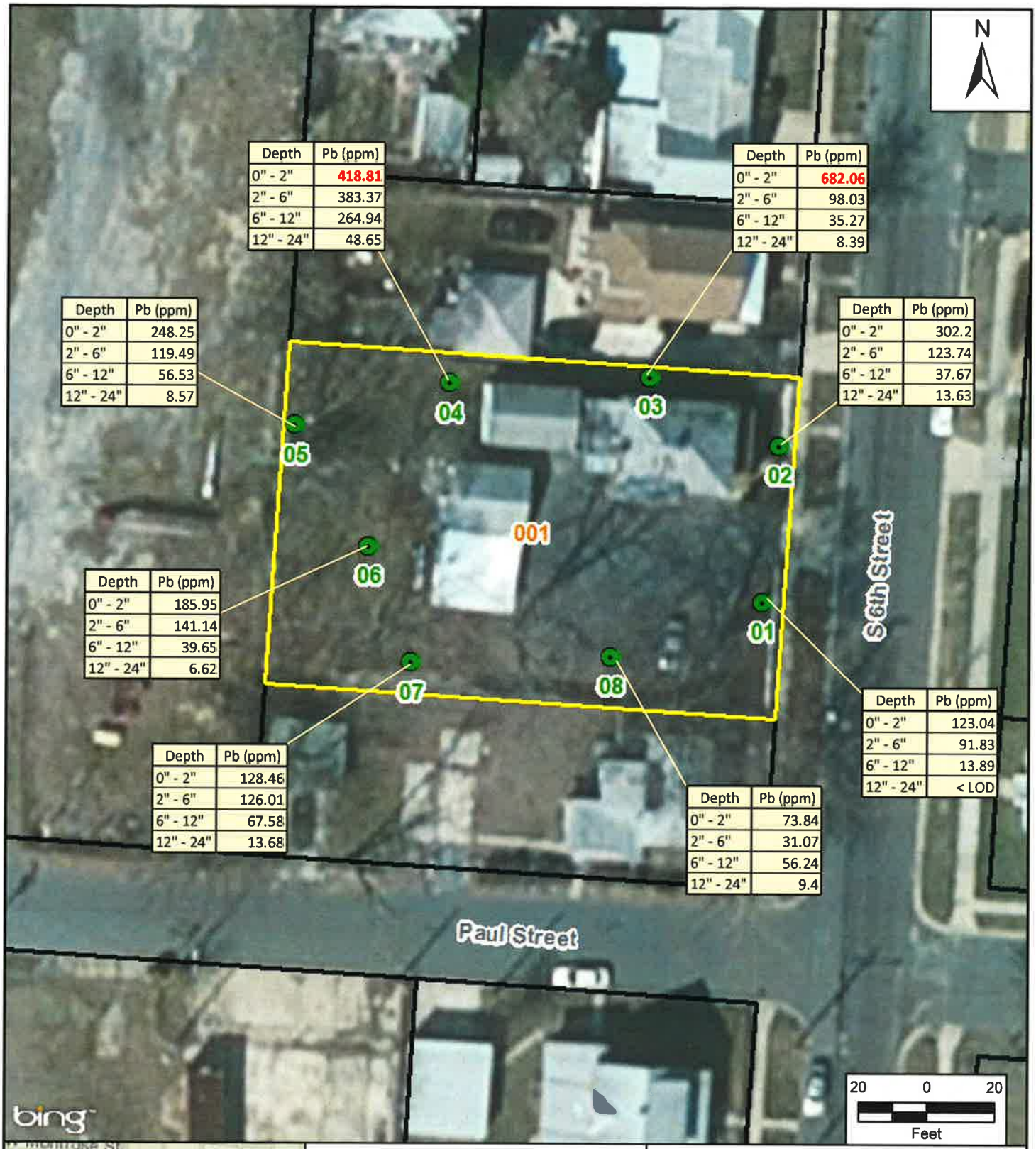

Legend

- Sampling/Borehole Location
- Sampled Parcel

Depth = Inches Below Ground Surface
Pb = Lead
<LOD = Below Level of Detection
ppm = parts per million

Source: Cumberland County Department of Planning and Development NJ Office of Information Technology (NJOIT), Office of Geographic Information Systems (OGIS), 2011, and Bing Maps Aerial Imagery, 2010-2011.

EPA Contract No.: EP-S5-13-01 TDD No.: S05-0010-1501-400

Former Kil-Tone Site Removal Assessment
Vineland, New Jersey

X-Ray Fluorescence Lead Results

Station Location ID: 001

TETRA TECH

Prepared For: joseph.gawarzewski | Prepared By: joel.peters

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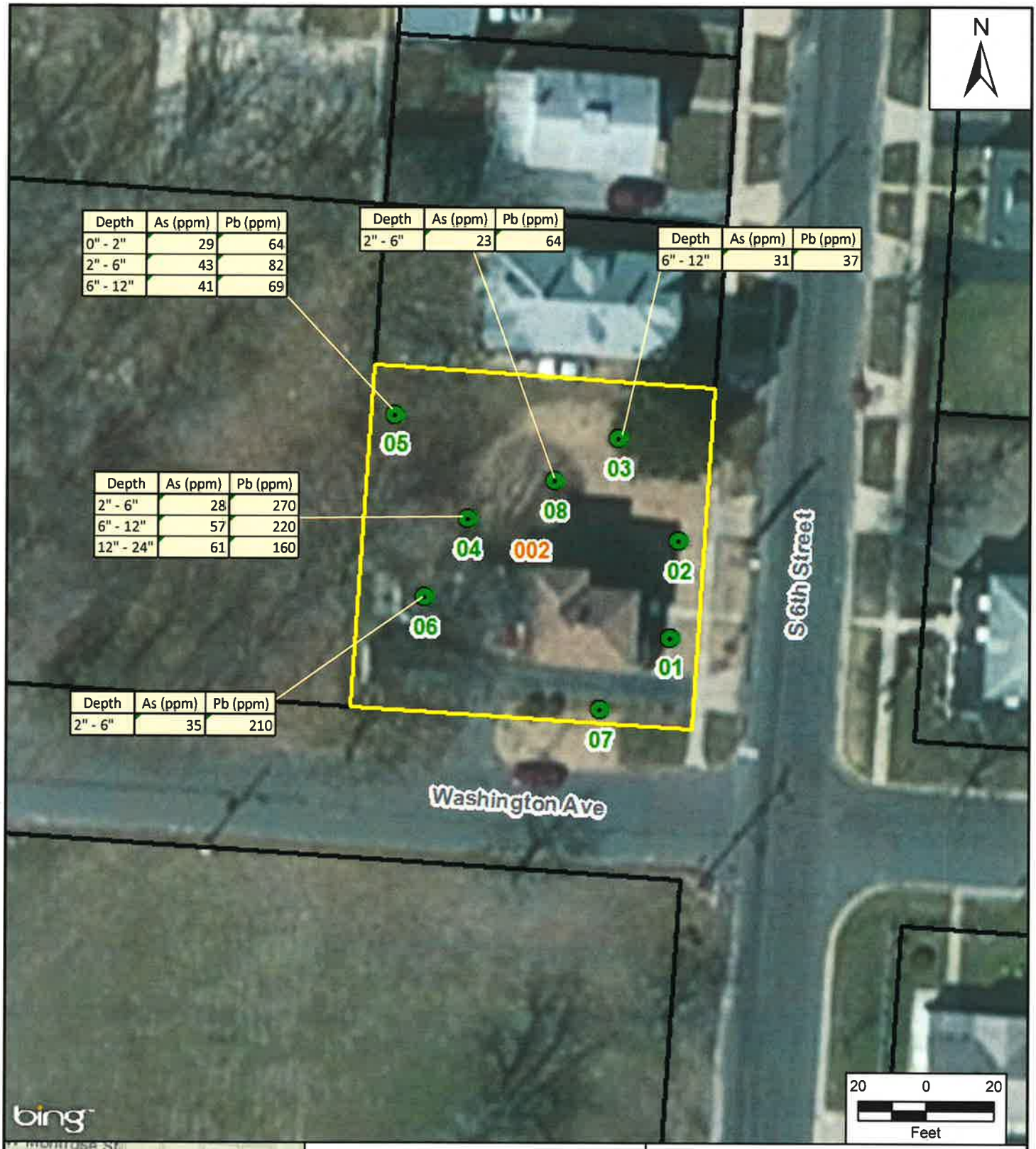
Date Saved: 5/20/2015

Coordinate System: NAD 1983 StatePlane New Jersey FIPS 2900 Feet Projection: Transverse Mercator Datum: North American 1983 Units: Foot US



Legend

- Sampling/Borehole Location
- Sampled Parcel

Depth = Inches Below Ground Surface (BGS)
As = Arsenic
Pb = Lead
<LOD = Below Level of Detection
ppm = parts per million

Source: Cumberland County Department of Planning and Development NJ Office of Information Technology (NJOIT), Office of Geographic Information Systems (OGIS), 2011, and Bing Maps Aerial Imagery, 2010-2011.

EPA Contract No.: EP-S5-13-01 TDD No.: S05-0010-1501-400

Former Kil-Tone Site Removal Assessment
Vineland, New Jersey

Arsenic and Lead Fixed Lab Results

Station Location ID: 002

TETRA TECH

Prepared For: joseph.gawarzewski | Prepared By: joel.peters

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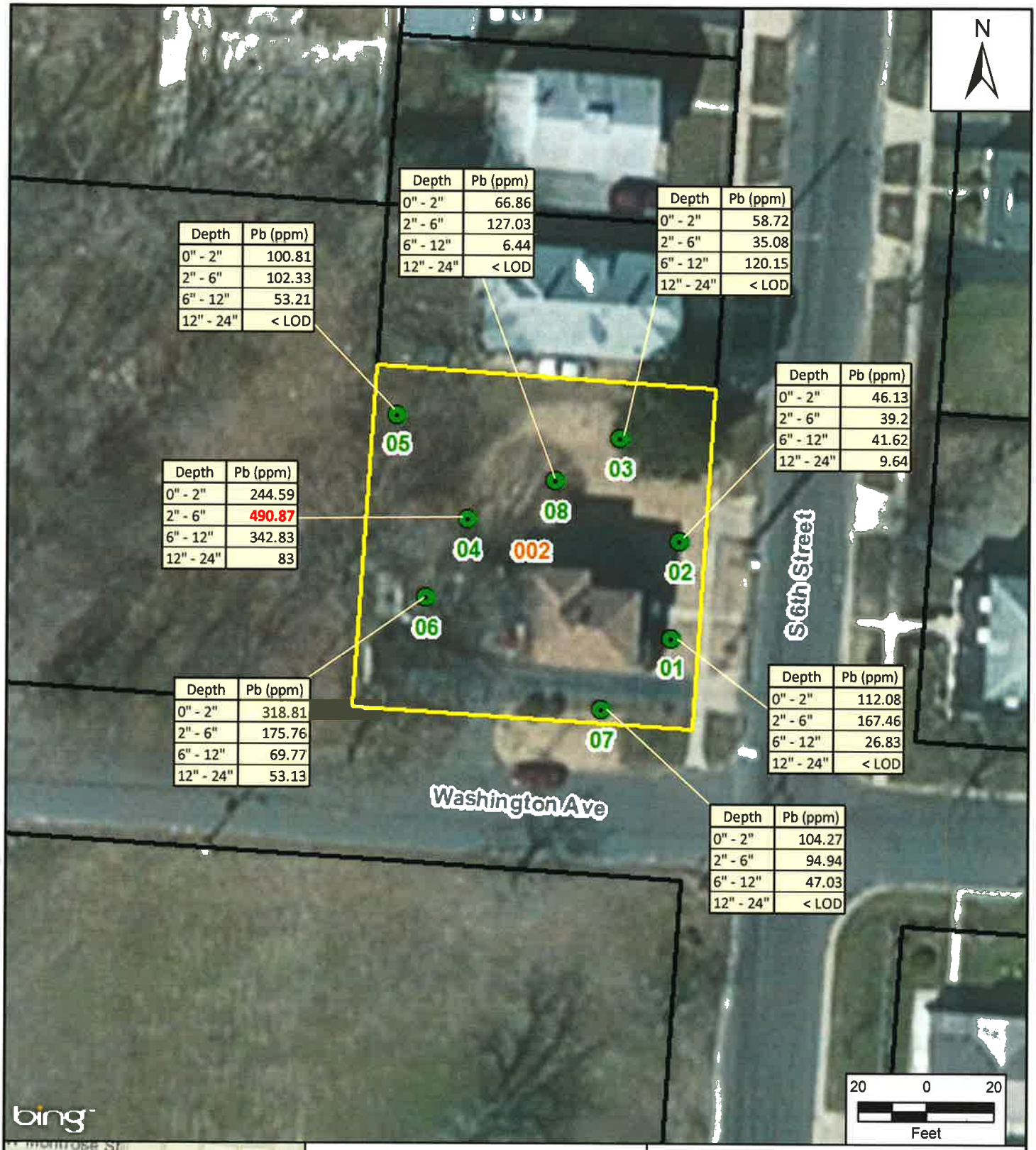
Date Saved: 5/15/2015

Coordinate System: NAD 1983 StatePlane New Jersey FIPS 2900 Feet Projection: Transverse Mercator Datum: North American 1983 Units: Foot US



Legend

- Sampling/Borehole Location
- Sampled Parcel

Depth = Inches Below Ground Surface
Pb = Lead
<LOD = Below Level of Detection
ppm = parts per million

Source: Cumberland County Department of Planning and Development NJ Office of Information Technology (NJOIT), Office of Geographic Information Systems (OGIS), 2011, and Bing Maps Aerial Imagery, 2010-2011.

EPA Contract No.: EP-S5-13-01 TDD No.: S05-0010-1501-400

Former Kil-Tone Site Removal Assessment
Vineland, New Jersey

X-Ray Fluorescence Lead Results

Station Location ID: 002

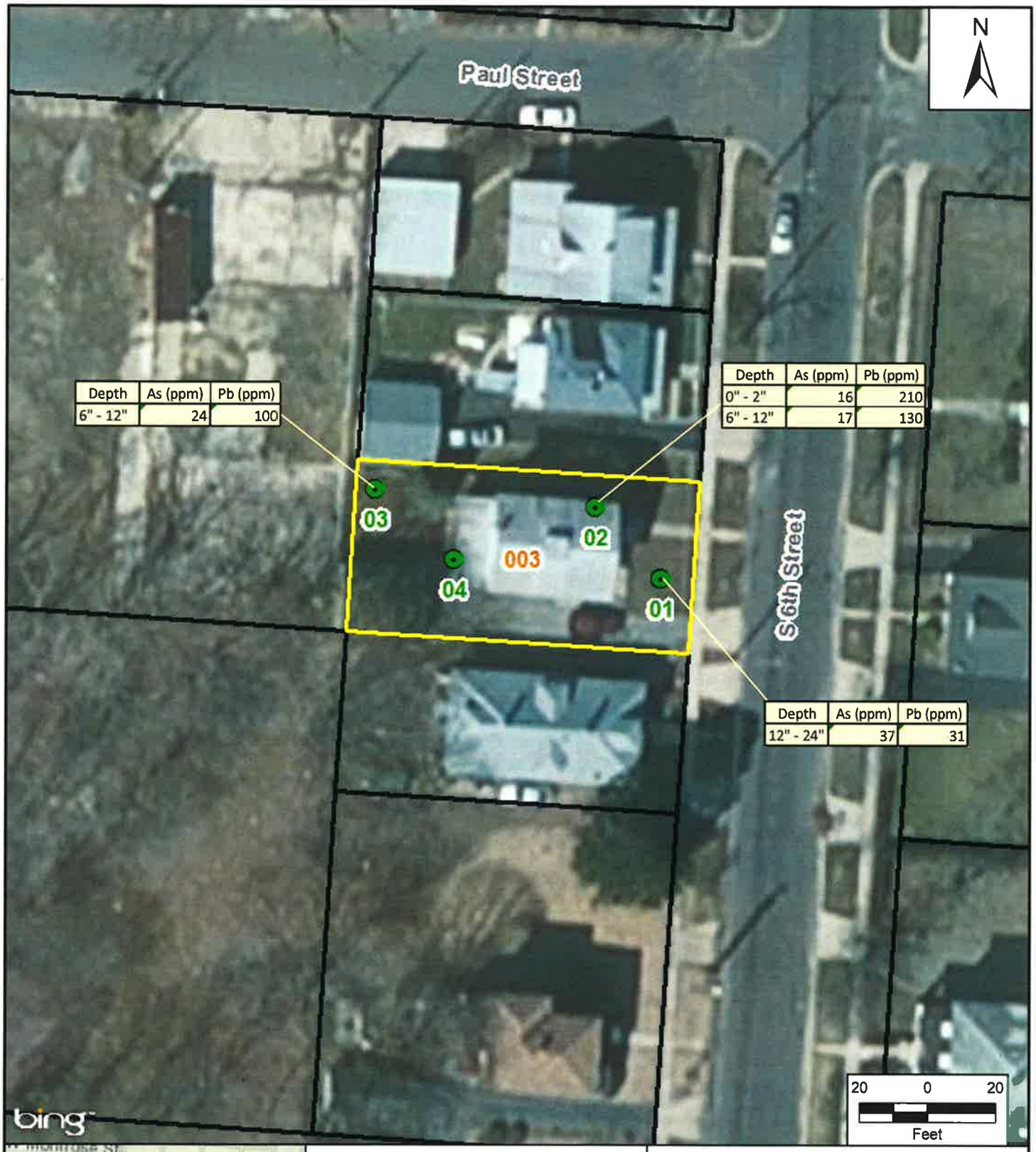
TETRA TECH

Prepared For: joseph.gawarzewski | Prepared By: joel.peters

Coordinate System: NAD 1983 StatePlane New Jersey FIPS 2900 Feet Projection: Transverse Mercator Datum: North American 1983 Units: Feet US

File Path: S:\CADD\ll\902600015051501400\mxd\XRF_LeadOnly\FIG_X_002_Vineland_730_S_6th_PB.mxd

Date Saved: 5/20/2015



Legend

- Sampling/Borehole Location
- Sampled Parcel

Depth = Inches Below Ground Surface (BGS)
As = Arsenic
Pb = Lead
<LOD = Below Level of Detection
ppm = parts per million

Source: Cumberland County Department of Planning and Development
NJ Office of Information Technology (NJOIT), Office of Geographic Information Systems (OGIS), 2011, and Bing Maps Aerial Imagery, 2010-2011.

EPA Contract No.: EP-S5-13-01 TDD No.: S05-0010-1501-400

Former Kil-Tone Site Removal Assessment
Vineland, New Jersey

Arsenic and Lead Fixed Lab Results

Station Location ID: 003

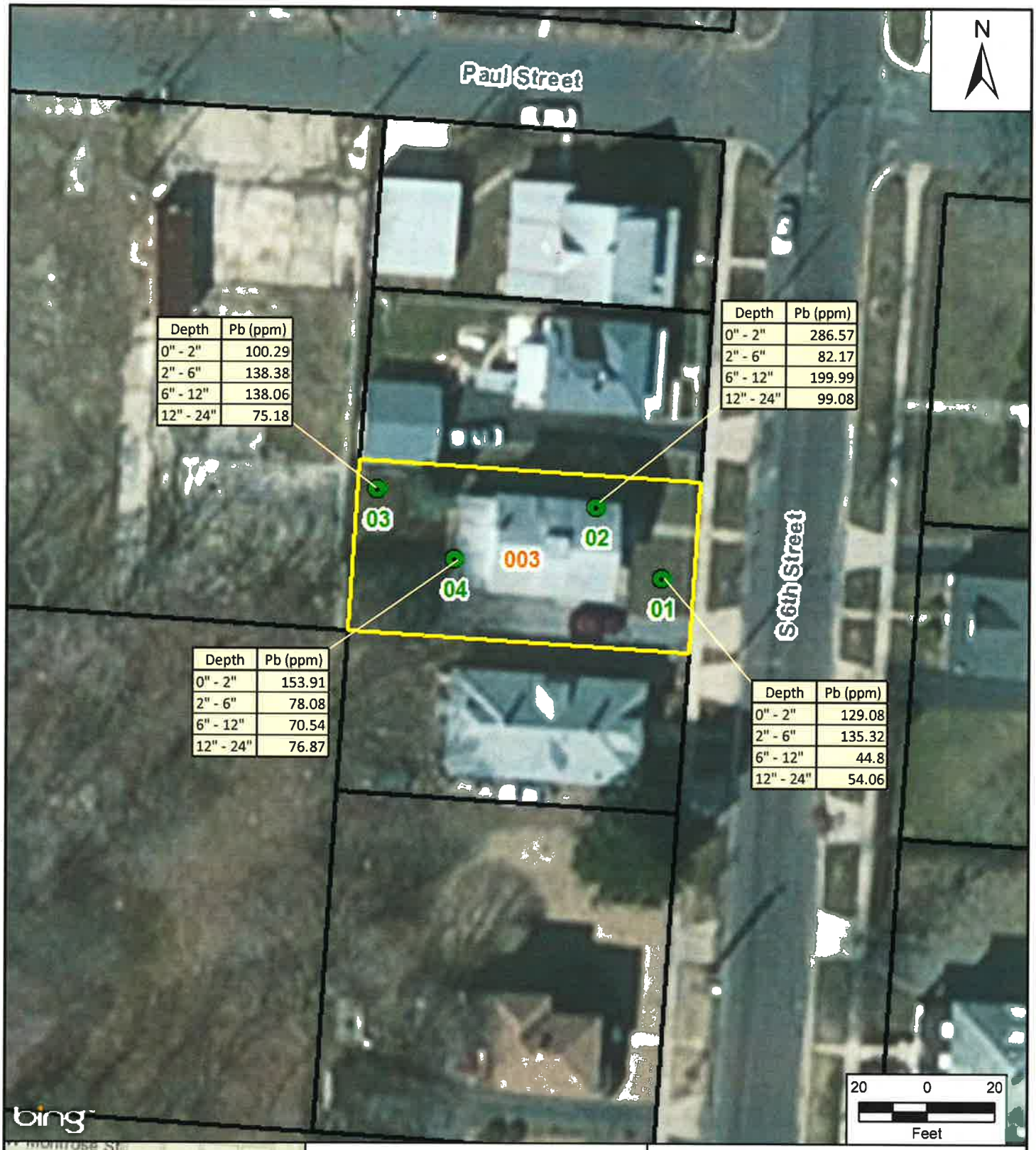
TETRA TECH

Prepared For: joseph gawarzewski | Prepared By: joel peters

Coordinate System: NAD 1983 StatePlane New Jersey FIPS 2900 Feet Projection: Transverse Mercator Datum: North American 1983 Units: Foot US

File Path: S:\CADD\ti\9026\0001\S05\1501400\mxd\Fixed_PB_AS\FIG_X_003_Vineland_726_S_6th_DESA.mxd

Date Saved: 5/15/2015



Depth	Pb (ppm)
0" - 2"	100.29
2" - 6"	138.38
6" - 12"	138.06
12" - 24"	75.18

Depth	Pb (ppm)
0" - 2"	286.57
2" - 6"	82.17
6" - 12"	199.99
12" - 24"	99.08

Depth	Pb (ppm)
0" - 2"	153.91
2" - 6"	78.08
6" - 12"	70.54
12" - 24"	76.87

Depth	Pb (ppm)
0" - 2"	129.08
2" - 6"	135.32
6" - 12"	44.8
12" - 24"	54.06

Legend

- Sampling/Borehole Location
- Sampled Parcel

Depth = Inches Below Ground Surface
Pb = Lead
<LOD = Below Level of Detection
ppm = parts per million

Source: Cumberland County Department of Planning and Development
NJ Office of Information Technology (NJOIT), Office of Geographic Information Systems (OGIS), 2011, and Bing Maps Aerial Imagery, 2010-2011.
EPA Contract No.: EP-S5-13-01 TDD No.: S05-0010-1501-400

Former Kil-Tone Site Removal Assessment
Vineland, New Jersey

X-Ray Fluorescence Lead Results
Station Location ID: 003

TETRA TECH

Prepared For: joseph gawarzewski | Prepared By: joel peters

Coordinate System: NAD 1983 StatePlane New Jersey FIPS 2900 Feet Projection: Transverse Mercator Datum:North American 1983 Units: Foot US

File Path: S:\CADD\ll\9026\0001\S05150\400\mxd\XRF_LeadOnly\FIG_X_003_Vineland_726_S_6th_PB.mxd

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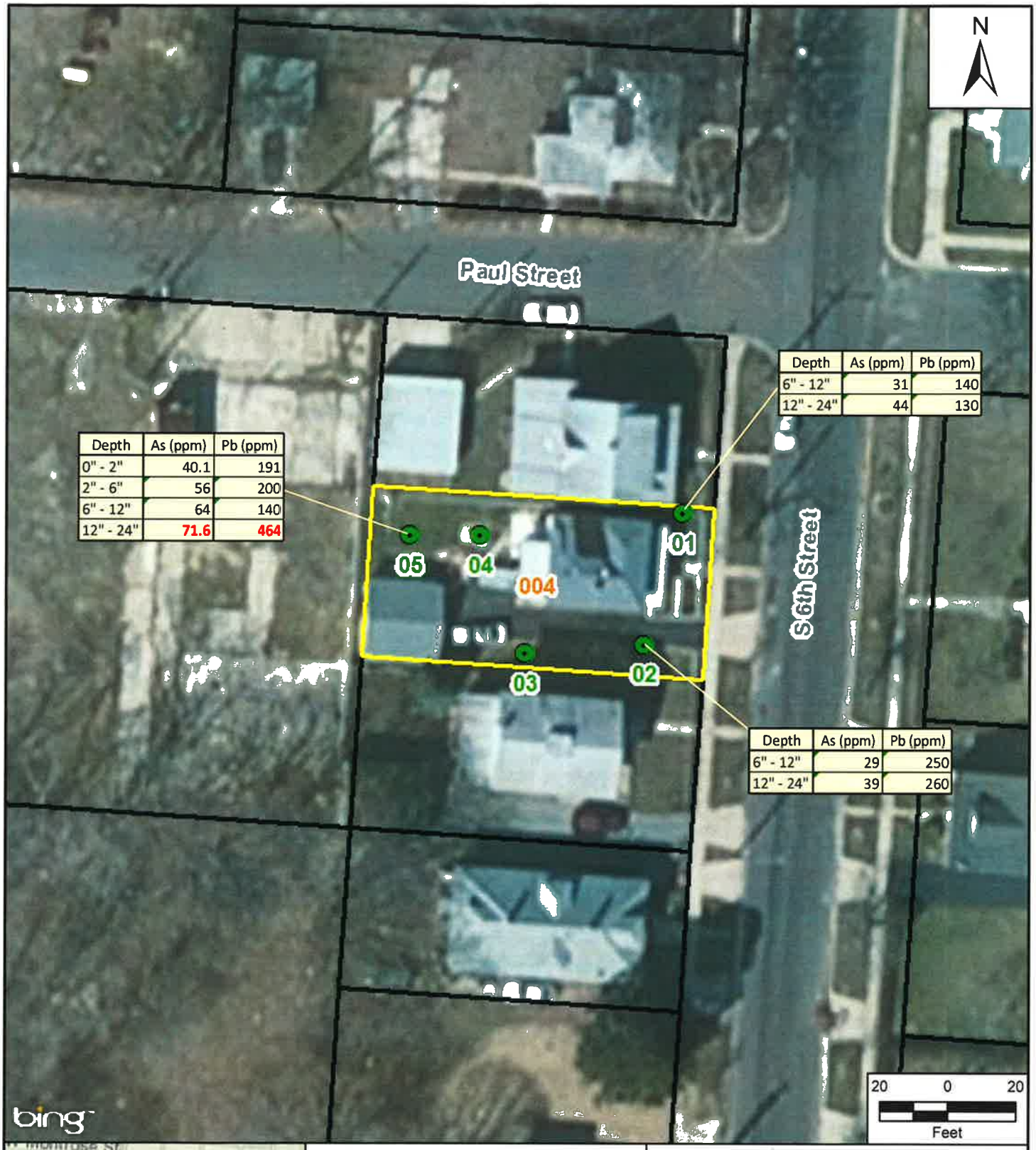


Legend

- Sampling/Borehole Location
- Sampled Parcel

Depth = Inches Below Ground Surface (BGS)
As = Arsenic
Pb = Lead
<LOD = Below Level of Detection
ppm = parts per million

Source: Cumberland County Department of Planning and Development NJ Office of Information Technology (NJOIT), Office of Geographic Information Systems (OGIS), 2011, and Bing Maps Aerial Imagery, 2010-2011.

EPA Contract No.: EP-S5-13-01 TDD No.: S05-0010-1501-400

Former Kil-Tone Site Removal Assessment
Vineland, New Jersey

Arsenic and Lead Fixed Lab Results

Station Location ID: 004

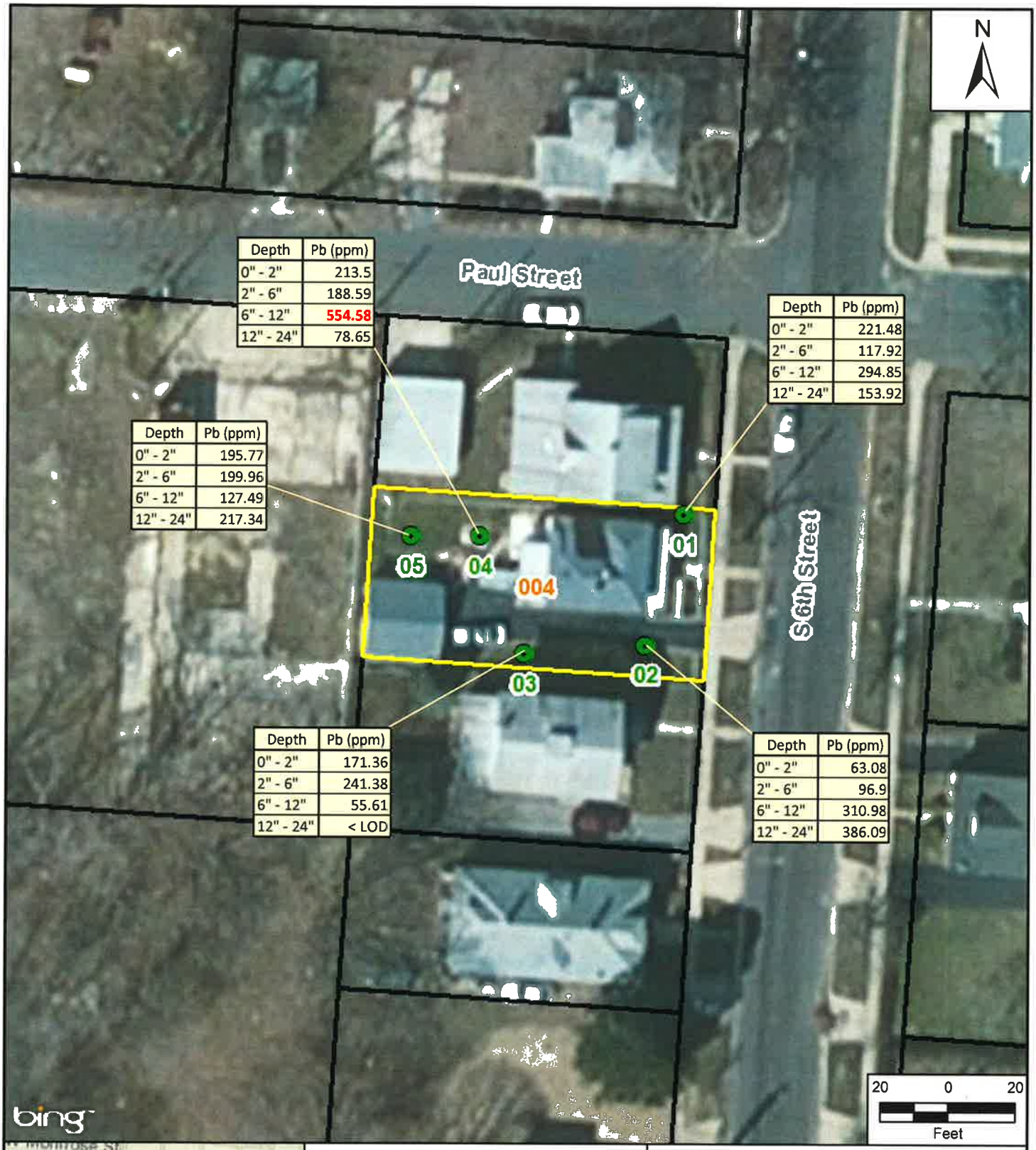
TETRA TECH

Prepared For: joseph.gawarzewski | Prepared By: joel.peters

Coordinate System: NAD 1983 StatePlane New Jersey FIPS 2900 Feet Projection: Transverse Mercator Datum: North American 1983 Units: Foot US

File Path: S:\CADD\ft\9026\0001\S05150140\mxd\Fixed_PB_ASIFIG_X_004_Vineland_724_S_6th_DESA.mxd

Date Saved: 5/15/2015



Legend

- Sampling/Borehole Location
- Sampled Parcel

Depth = Inches Below Ground Surface
Pb = Lead
<LOD = Below Level of Detection
ppm = parts per million

Source: Cumberland County Department of Planning and Development NJ Office of Information Technology (NJOIT), Office of Geographic Information Systems (OGIS), 2011, and Bing Maps Aerial Imagery, 2010-2011.

EPA Contract No.: EP-S5-13-01 TDD No.: S05-0010-1501-400

Former Kil-Tone Site Removal Assessment
Vineland, New Jersey

X-Ray Fluorescence Lead Results

Station Location ID: 004

TETRA TECH

Prepared For: joseph.gawarzewski | Prepared By: joel peters

Coordinate System: NAD 1983 StatePlane New Jersey FIPS 2900 Feet Projection: Transverse Mercator Datum: North American 1983 Units: Feet US

File Path: S:\CADD\19026\0001\S05150140\mxd\XRF_LeadOnly\FIG_X_004_Vineland_724_S_6th_PB.mxd

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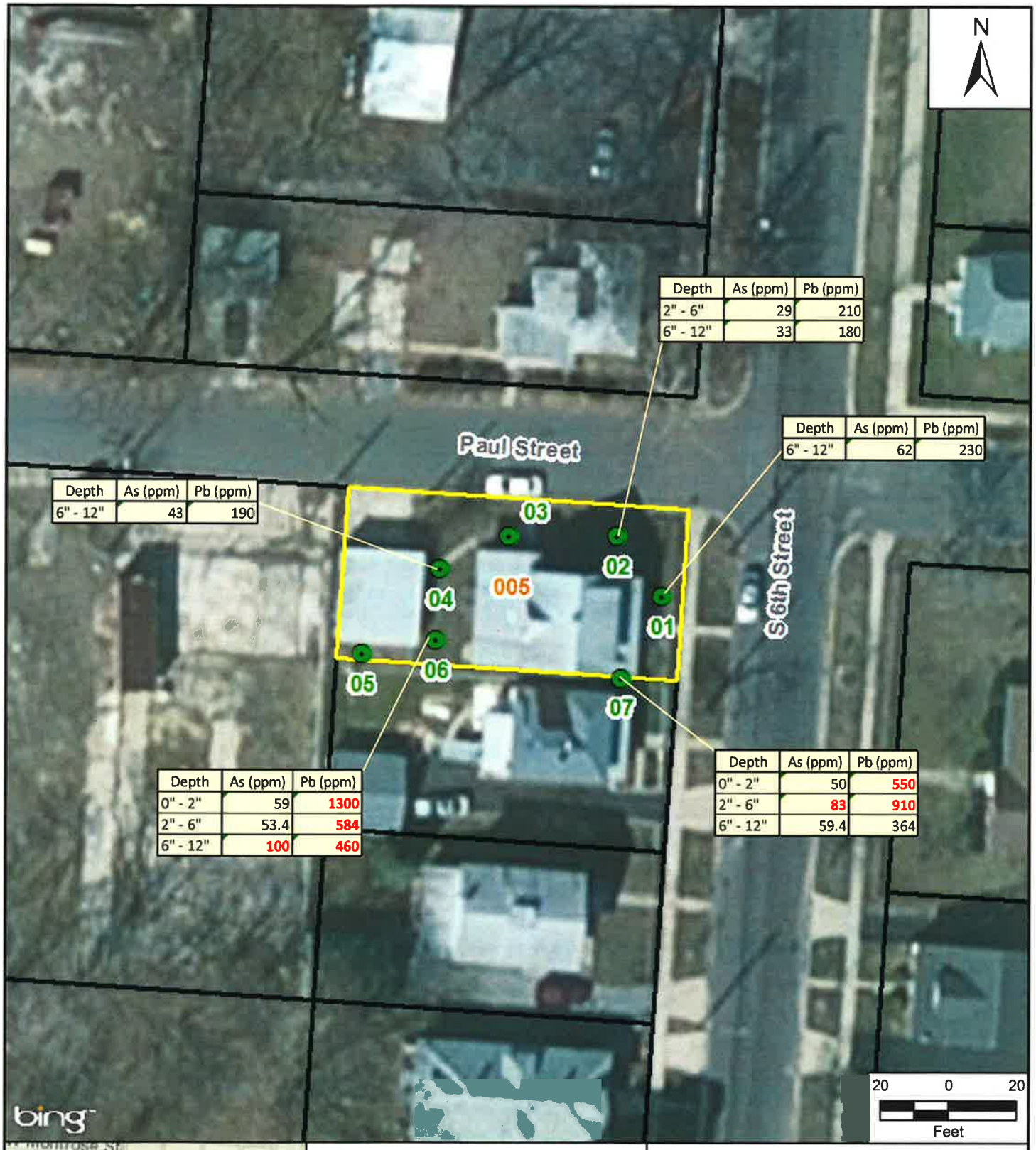


Depth	As (ppm)	Pb (ppm)
2" - 6"	29	210
6" - 12"	33	180

Depth	As (ppm)	Pb (ppm)
6" - 12"	62	230

Depth	As (ppm)	Pb (ppm)
6" - 12"	43	190

Depth	As (ppm)	Pb (ppm)
0" - 2"	59	1300
2" - 6"	53.4	584
6" - 12"	100	460

Depth	As (ppm)	Pb (ppm)
0" - 2"	50	550
2" - 6"	83	910
6" - 12"	59.4	364

Legend

- Sampling/Borehole Location
- Sampled Parcel

Depth = Inches Below Ground Surface (BGS)
As = Arsenic
Pb = Lead
<LOD = Below Level of Detection
ppm = parts per million

Source: Cumberland County Department of Planning and Development, NJ Office of Information Technology (NJOIT), Office of Geographic Information Systems (OGIS), 2011, and Bing Maps Aerial Imagery, 2010-2011.
EPA Contract No.: EP-S5-13-01 TDD No.: S05-0010-1501-400

Former Kil-Tone Site Removal Assessment
Vineland, New Jersey

Arsenic and Lead Fixed Lab Results
Station Location ID: 005

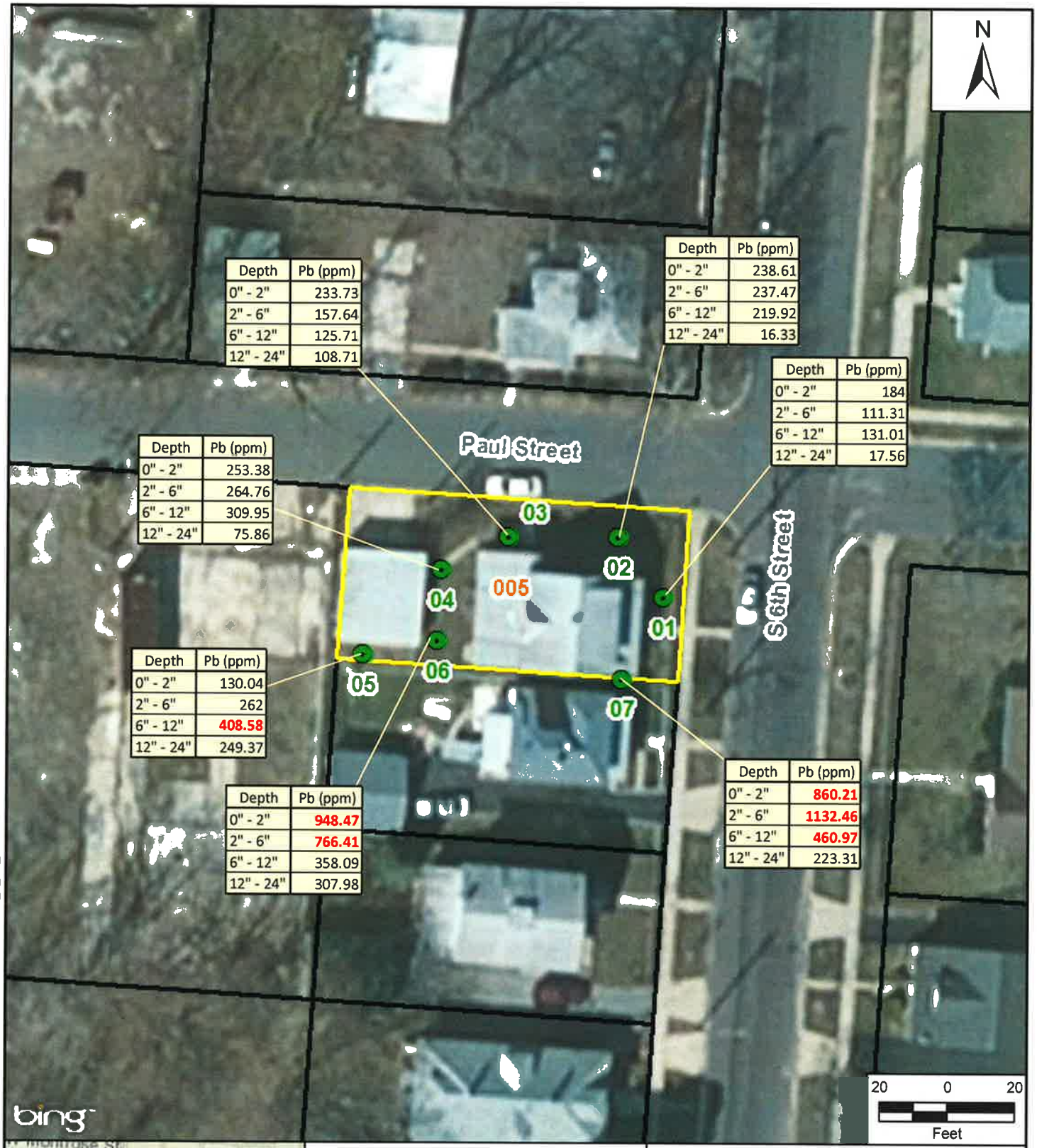
TETRA TECH

Prepared For: joseph.gawarzewski | Prepared By: joel.peters

Coordinate System: NAD 1983 StatePlane New Jersey FIPS 2900 Feet Projection: Transverse Mercator Datum: North American 1983 Units: Foot US

File Path: S:\CADD\19026\0001\S05150140\mxd\Fixed_PB_ASIFIG_X_005_Vineland_722_S_6th_DESA.mxd

Date Saved: 5/15/2015



Depth	Pb (ppm)
0" - 2"	233.73
2" - 6"	157.64
6" - 12"	125.71
12" - 24"	108.71

Depth	Pb (ppm)
0" - 2"	238.61
2" - 6"	237.47
6" - 12"	219.92
12" - 24"	16.33

Depth	Pb (ppm)
0" - 2"	184
2" - 6"	111.31
6" - 12"	131.01
12" - 24"	17.56

Depth	Pb (ppm)
0" - 2"	253.38
2" - 6"	264.76
6" - 12"	309.95
12" - 24"	75.86

Depth	Pb (ppm)
0" - 2"	130.04
2" - 6"	262
6" - 12"	408.58
12" - 24"	249.37

Depth	Pb (ppm)
0" - 2"	948.47
2" - 6"	766.41
6" - 12"	358.09
12" - 24"	307.98

Depth	Pb (ppm)
0" - 2"	860.21
2" - 6"	1132.46
6" - 12"	460.97
12" - 24"	223.31

Legend

- Sampling/Borehole Location
- Sampled Parcel

Depth = Inches Below Ground Surface
Pb = Lead
<LOD = Below Level of Detection
ppm = parts per million

Source: Cumberland County Department of Planning and Development
NJ Office of Information Technology (NJOIT), Office of Geographic Information Systems (OGIS), 2011, and Bing Maps Aerial Imagery, 2010-2011.
EPA Contract No.: EP-S5-13-01 TDD No.: S05-0010-1501-400

Former Kil-Tone Site Removal Assessment
Vineland, New Jersey

X-Ray Fluorescence Lead Results
Station Location ID: 005

TETRA TECH

Prepared For: joseph.gawarzewski | Prepared By: joel.peters

Coordinate System: NAD 1983 StatePlane New Jersey FIPS 2900 Feet Projection: Transverse Mercator Datum: North American 1983 Units: Foot US

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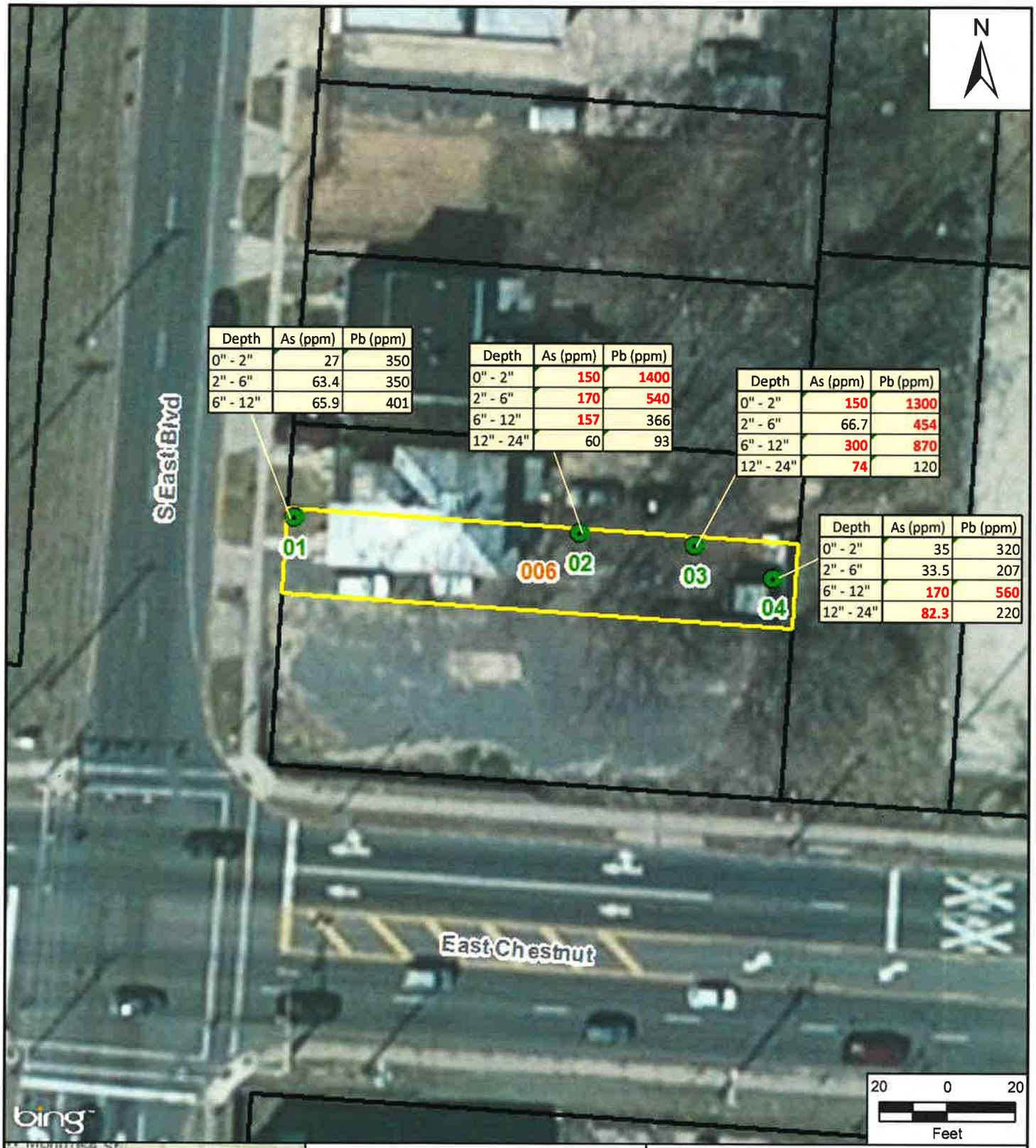

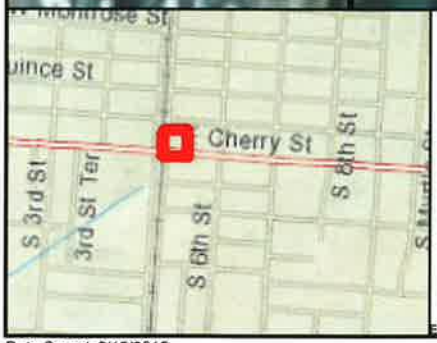

Legend

- Sampling/Borehole Location
- Sampled Parcel

Depth = Inches Below Ground Surface (BGS)
As = Arsenic
Pb = Lead
<LOD = Below Level of Detection
ppm = parts per million

Source: Cumberland County Department of Planning and Development NJ Office of Information Technology (NJOIT), Office of Geographic Information Systems (OGIS), 2011, and Bing Maps Aerial Imagery, 2010-2011.

EPA Contract No.: EP-S5-13-01 TDD No.: S05-0010-1501-400

Former Kil-Tone Site Removal Assessment
Vineland, New Jersey

Arsenic and Lead Fixed Lab Results

Station Location ID: 006

TETRA TECH

Prepared For: joseph.gawarzewski | Prepared By: joel.peters

Coordinate System: NAD 1983 StatePlane New Jersey FIPS 2900 Feet Projection: Transverse Mercator Datum: North American 1983 Units: Feet US

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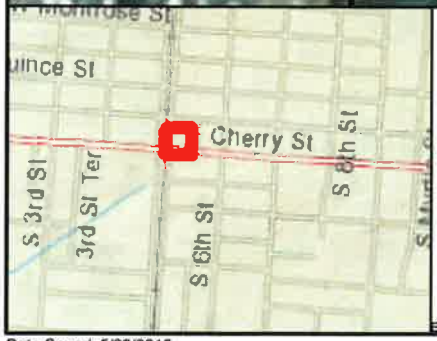

Legend

- Sampling/Borehole Location
- Sampled Parcel

Depth = Inches Below Ground Surface
Pb = Lead
<LOD = Below Level of Detection
ppm = parts per million

Source: Cumberland County Department of Planning and Development NJ Office of Information Technology (NJOIT), Office of Geographic Information Systems (OGIS), 2011, and Bing Maps Aerial Imagery, 2010-2011.

EPA Contract No.: EP-S5-13-01 TDD No.: S05-0010-1501-400

Former Kil-Tone Site Removal Assessment
Vineland, New Jersey

X-Ray Fluorescence Lead Results

Station Location ID: 006

TETRA TECH

Prepared For: joseph.gawarzewski | Prepared By: joel.peters

Coordinate System: NAD 1983 StatePlane New Jersey FIPS 2900 Feet Projection: Transverse Mercator Datum: North American 1983 Units: Foot US

File Path: S:\CADD\ft\9026\0001\S05150140\mxd\XRF_LeadOnly\FIG_X_006_Vineland_621_SE_Blvd_PB.mxd

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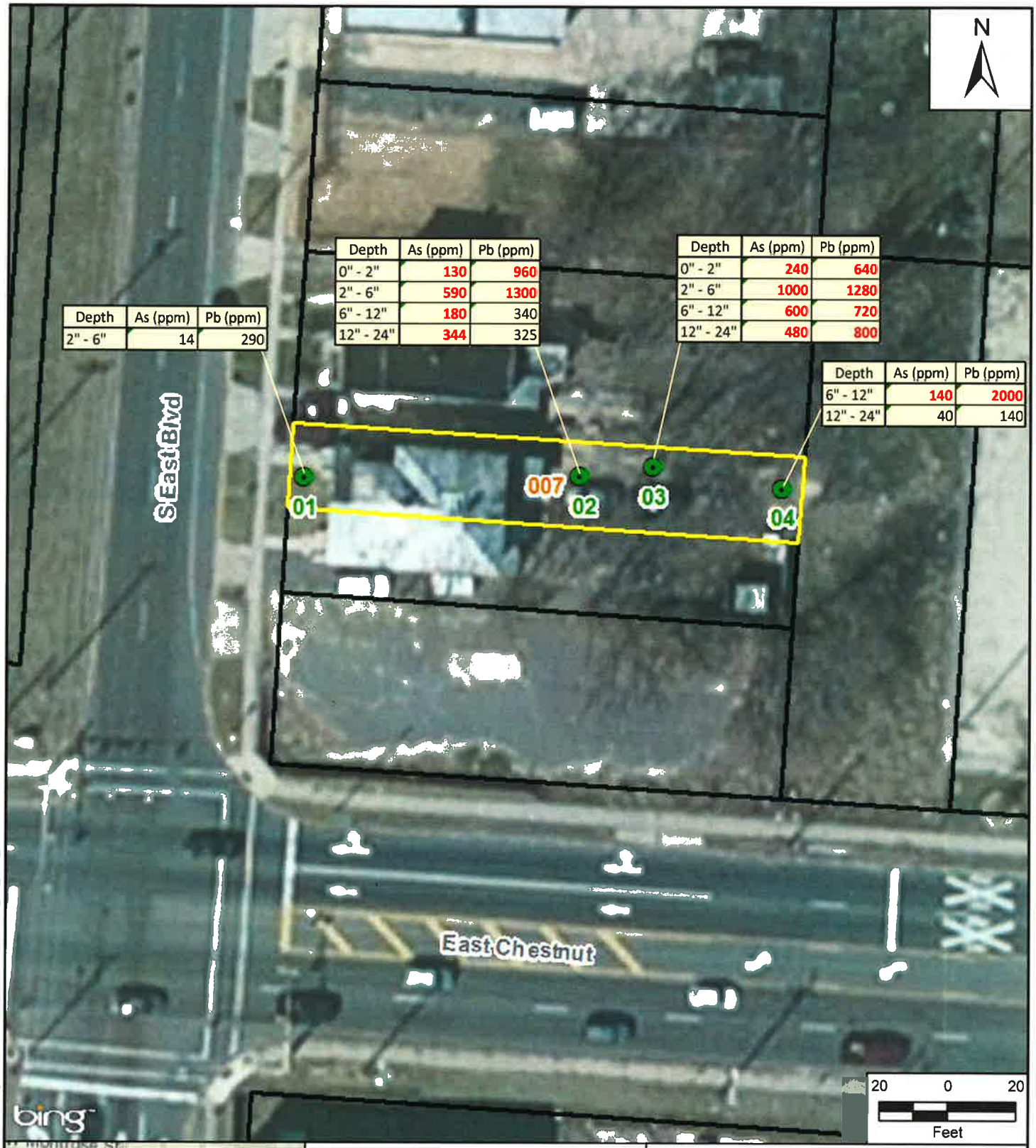

Depth	As (ppm)	Pb (ppm)
2" - 6"	14	290

Depth	As (ppm)	Pb (ppm)
0" - 2"	130	960
2" - 6"	590	1300
6" - 12"	180	340
12" - 24"	344	325

Depth	As (ppm)	Pb (ppm)
0" - 2"	240	640
2" - 6"	1000	1280
6" - 12"	600	720
12" - 24"	480	800

Depth	As (ppm)	Pb (ppm)
6" - 12"	140	2000
12" - 24"	40	140

Legend

- Sampling/Borehole Location
- Sampled Parcel

Depth = Inches Below Ground Surface (BGS)
As = Arsenic
Pb = Lead
<LOD = Below Level of Detection
ppm = parts per million

Source: Cumberland County Department of Planning and Development
NJ Office of Information Technology (NJOIT), Office of Geographic Information Systems (OGIS), 2011, and Bing Maps Aerial Imagery, 2010-2011.
EPA Contract No.: EP-S5-13-01 TDD No.: S05-0010-1501-400

Former Kil-Tone Site Removal Assessment
Vineland, New Jersey

Arsenic and Lead Fixed Lab Results
Station Location ID: 007

TETRA TECH

Prepared For: joseph.gawarzewski | Prepared By: joel.peters

Coordinate System: NAD 1983 StatePlane New Jersey FIPS 2900 Feet Projection: Transverse Mercator Datum: North American 1983 Units: Foot US

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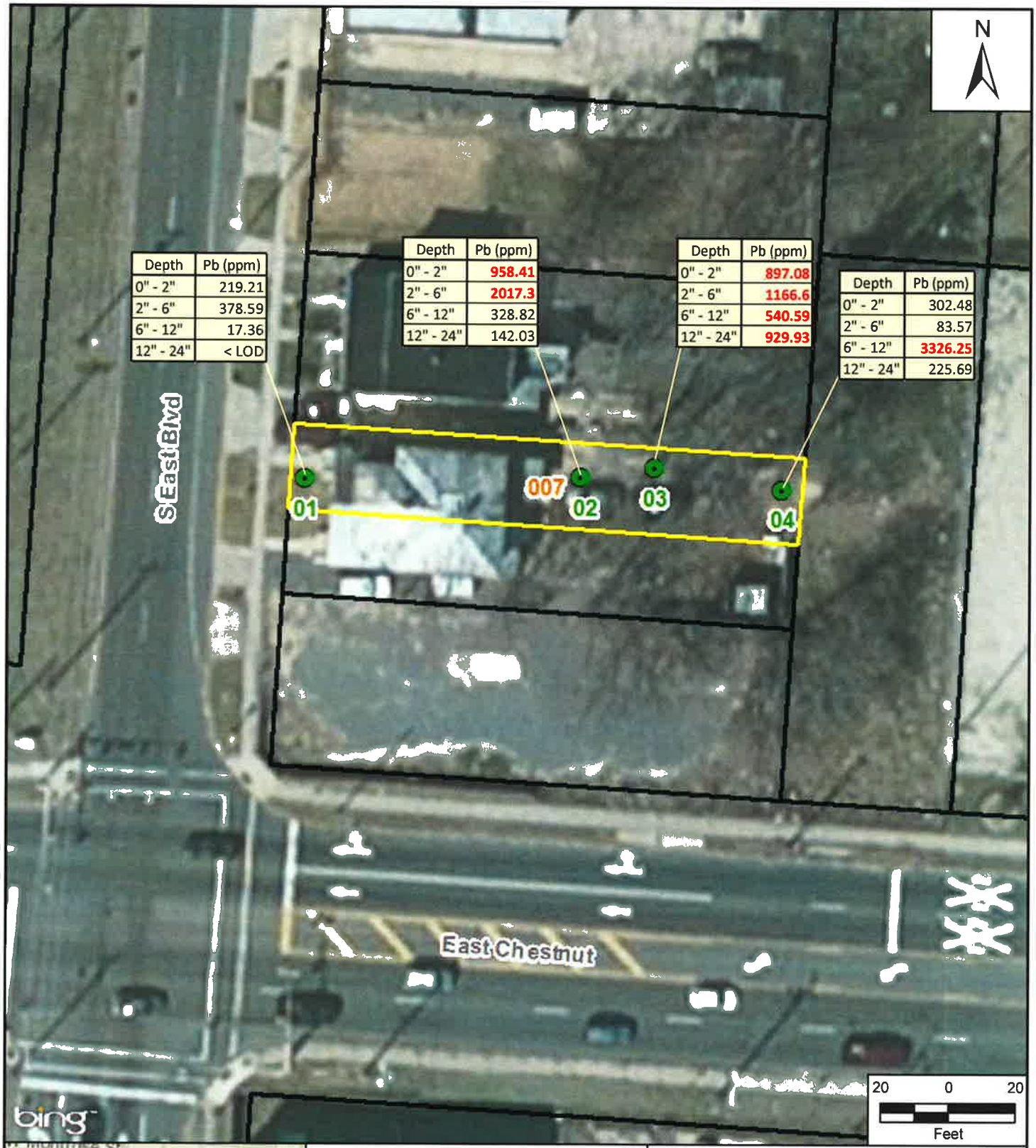


Legend

- Sampling/Borehole Location
- Sampled Parcel

Depth = Inches Below Ground Surface
Pb = Lead
<LOD = Below Level of Detection
ppm = parts per million

Source: Cumberland County Department of Planning and Development NJ Office of Information Technology (NJOIT), Office of Geographic Information Systems (OGIS), 2011, and Bing Maps Aerial Imagery, 2010-2011.
EPA Contract No.: EP-S5-13-01 TDD No.: S05-0010-1501-400

Former Kil-Tone Site Removal Assessment
Vineland, New Jersey

X-Ray Fluorescence Lead Results
Station Location ID: 007

TETRA TECH

Prepared For: joseph.gawarzewski | Prepared By: joel.peters

Coordinate System: NAD 1983 StatePlane New Jersey FIPS 2900 Feet Projection: Transverse Mercator Datum: North American 1983 Units: Foot US

File Path: S:\CADD\ti\9026\0001\S05150140\mxd\XRF_LeadOnly\FIG_X_007_Vineland_619_SE_Blvd_PB.mxd

Date Saved: 5/20/2015

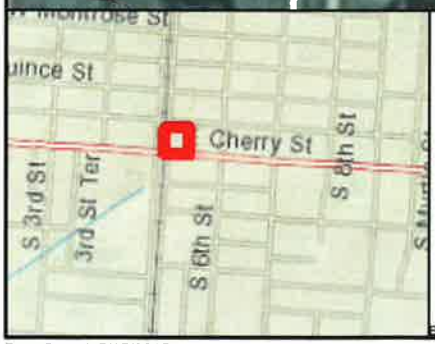
Depth	As (ppm)	Pb (ppm)
2" - 6"	21	170

Depth	As (ppm)	Pb (ppm)
0" - 2"	24	660
2" - 6"	31	860
6" - 12"	27.7	731
12" - 24"	22.7	567

Depth	As (ppm)	Pb (ppm)
0" - 2"	21.7	348
2" - 6"	36	320
6" - 12"	29	140

Depth	As (ppm)	Pb (ppm)
2" - 6"	38.1	760
6" - 12"	19	350

Depth	As (ppm)	Pb (ppm)
0" - 2"	32.1	599
2" - 6"	63	890
6" - 12"	69	1300



Legend

- Sampling/Borehole Location
- Sampled Parcel

Depth = Inches Below Ground Surface (BGS)
As = Arsenic
Pb = Lead
<LOD = Below Level of Detection
ppm = parts per million

Source: Cumberland County Department of Planning and Development NJ Office of Information Technology (NJOIT), Office of Geographic Information Systems (OGIS), 2011, and Bing Maps Aerial Imagery, 2010-2011.

EPA Contract No.: EP-S5-13-01 TDD No.: S05-0010-1501-400

Former Kil-Tone Site Removal Assessment
Vineland, New Jersey

Arsenic and Lead Fixed Lab Results

Station Location ID: 008

TETRA TECH

Prepared For: joseph.gawarzewski | Prepared By: joel.peters

Coordinate System: NAD 1983 StatePlane New Jersey FIPS 2900 Feet Projection: Transverse Mercator Datum: North American 1983 Units: Foot US

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Date Saved: 5/15/2015

Legend

- Sampling/Borehole Location
- Sampled Parcel

Depth = Inches Below Ground Surface
Pb = Lead
<LOD = Below Level of Detection
ppm = parts per million

Source: Cumberland County Department of Planning and Development NJ Office of Information Technology (NJOIT), Office of Geographic Information Systems (OGIS), 2011, and Bing Maps Aerial Imagery, 2010-2011.

EPA Contract No.: EP-S5-13-01 TDD No.: S05-0010-1501-400

Former Kil-Tone Site Removal Assessment
Vineland, New Jersey

X-Ray Fluorescence Lead Results
Station Location ID: 008

TETRA TECH

Prepared For: joseph.gawarzewski | Prepared By: joel.peters

Coordinate System: NAD 1983 StatePlane New Jersey FIPS 2900 Feet Projection: Transverse Mercator Datum: North American 1983 Units: Foot US

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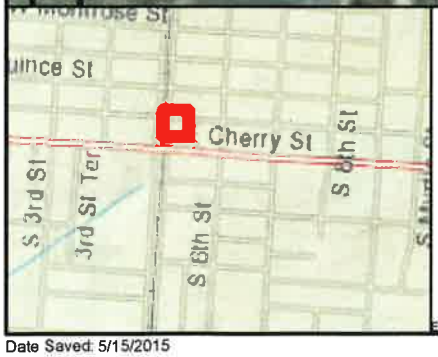

Legend

- Sampling/Borehole Location
- Sampled Parcel

Depth = Inches Below Ground Surface (BGS)
As = Arsenic
Pb = Lead
<LOD = Below Level of Detection
ppm = parts per million

Source: Cumberland County Department of Planning and Development NJ Office of Information Technology (NJOIT), Office of Geographic Information Systems (OGIS), 2011, and Bing Maps Aerial Imagery, 2010-2011.
EPA Contract No.: EP-S5-13-01 TDD No.: S05-0010-1501-400

Former Kil-Tone Site Removal Assessment
Vineland, New Jersey

Arsenic and Lead Fixed Lab Results
Station Location ID: 009

TETRA TECH

Prepared For: joseph.gawarzewski | Prepared By: joel.peters

Coordinate System: NAD 1983 StatePlane New Jersey FIPS 2900 Feet Projection: Transverse Mercator Datum:North American 1983 Units: Feet US

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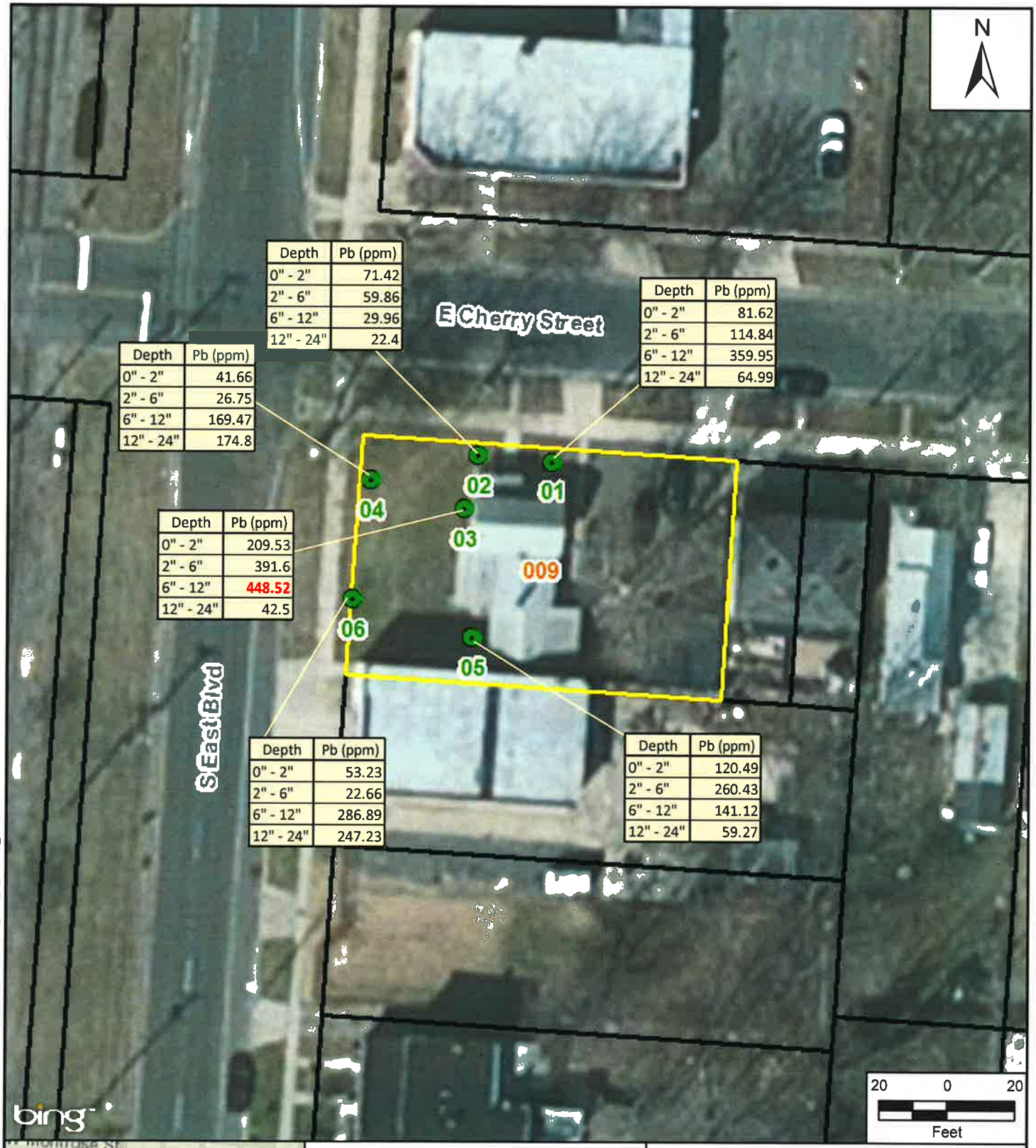

Legend

- Sampling/Borehole Location
- Sampled Parcel

Depth = Inches Below Ground Surface
Pb = Lead
<LOD = Below Level of Detection
ppm = parts per million

Source: Cumberland County Department of Planning and Development NJ Office of Information Technology (NJOIT), Office of Geographic Information Systems (OGIS), 2011, and Bing Maps Aerial Imagery, 2010-2011.
EPA Contract No.: EP-S5-13-01 TDD No.: S05-0010-1501-400

Former Kil-Tone Site Removal Assessment
Vineland, New Jersey

X-Ray Fluorescence Lead Results
Station Location ID: 009

TETRA TECH

Prepared For: joseph.gawarzewski | Prepared By: joel.peters

File Path: S:\CADD\19026\0001\S05150140\mxd\XRF_LeadOnly\FIG_X_009_Vineland_503_E_Cherry_PB.mxd

Date Saved: 5/20/2015

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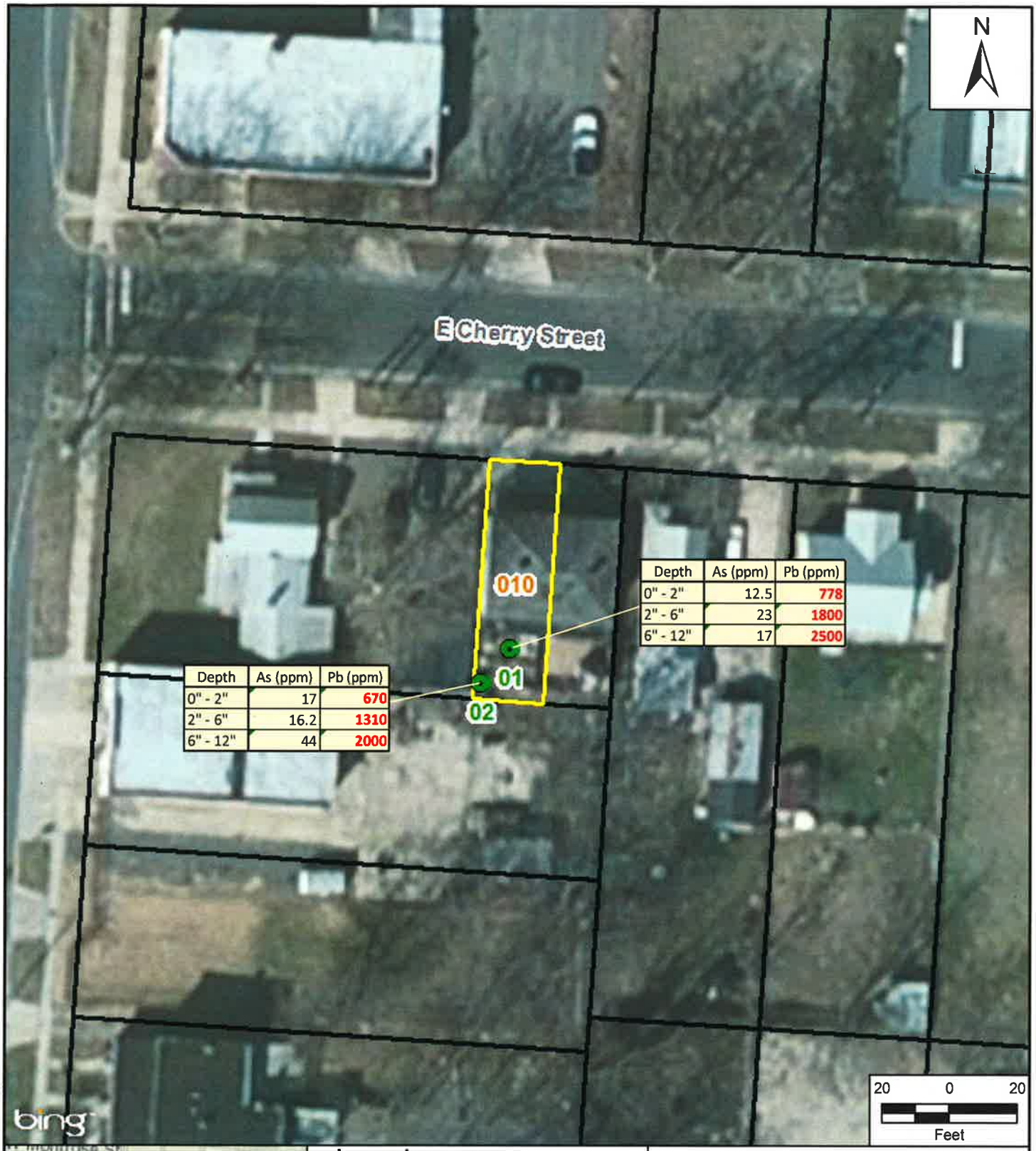


Legend

- Sampling/Borehole Location
- Sampled Parcel

Depth = Inches Below Ground Surface (BGS)
As = Arsenic
Pb = Lead
<LOD = Below Level of Detection
ppm = parts per million

Source: Cumberland County Department of Planning and Development NJ Office of Information Technology (NJOIT), Office of Geographic Information Systems (OGIS), 2011, and Bing Maps Aerial Imagery, 2010-2011.

EPA Contract No.: EP-S5-13-01 TDD No.: S05-0010-1501-400

Former Kil-Tone Site Removal Assessment
Vineland, New Jersey

Arsenic and Lead Fixed Lab Results

Station Location ID: 010

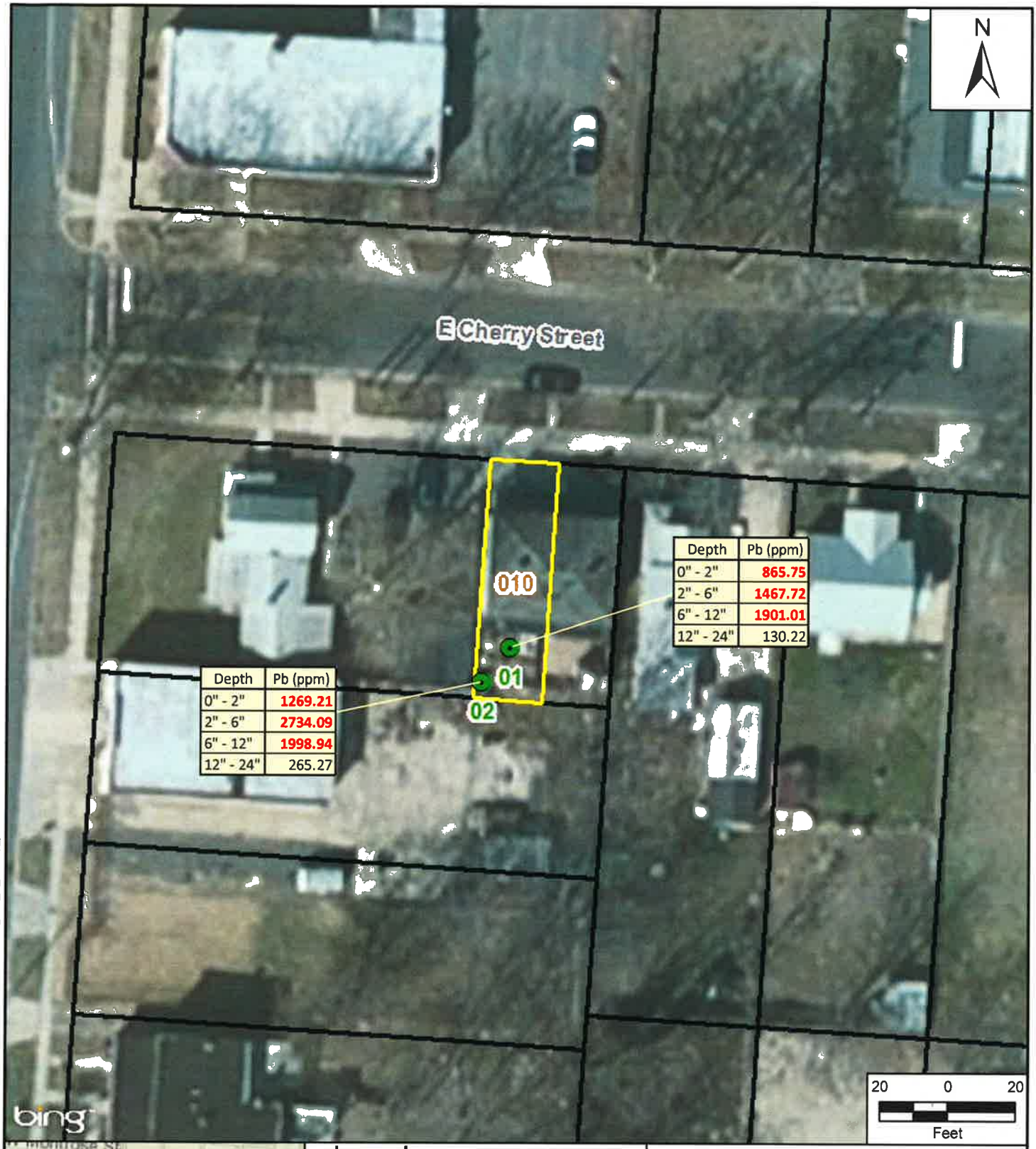
TETRA TECH

Prepared For: joseph.gawarzewski | Prepared By: joel.peters

Coordinate System: NAD 1983 StatePlane New Jersey FIPS 2900 Feet Projection: Transverse Mercator Datum: North American 1983 Units: Feet US

File Path: S:\CADD\IM9026\0001\S05150140\mxd\Fixed_PB_ASIFIG_X_010_Vineland_507_E_Cherry_DESA.mxd

Date Saved: 5/15/2015



Legend

- Sampling/Borehole Location
- Sampled Parcel

Depth = Inches Below Ground Surface
Pb = Lead
<LOD = Below Level of Detection
ppm = parts per million

Source: Cumberland County Department of Planning and Development NJ Office of Information Technology (NJOIT), Office of Geographic Information Systems (OGIS), 2011, and Bing Maps Aerial Imagery, 2010-2011.
EPA Contract No.: EP-S5-13-01 TDD No.: S05-0010-1501-400

Former Kil-Tone Site Removal Assessment
Vineland, New Jersey

X-Ray Fluorescence Lead Results
Station Location ID: 010

TETRA TECH

Prepared For: joseph.gawarzewski | Prepared By: joel.peters

File Path: S:\CADD\ll9026\0001S05150140\mxd\XRF_LeadOnly\FIG_X_010_Vineland_507_E_Cherry_PB.mxd

Date Saved: 5/20/2015

Coordinate System: NAD 1983 StatePlane New Jersey FIPS 2900 Feet Projection: Transverse Mercator Datum:North American 1983 Units: Foot US

Legend

- Sampling/Borehole Location
- Sampled Parcel

Depth = Inches Below Ground Surface (BGS)
As = Arsenic
Pb = Lead
<LOD = Below Level of Detection
ppm = parts per million

Source: Cumberland County Department of Planning and Development NJ Office of Information Technology (NJOIT), Office of Geographic Information Systems (OGIS), 2011, and Bing Maps Aerial Imagery, 2010-2011.

EPA Contract No.: EP-S5-13-01 TDD No.: S05-0010-1501-400

Former Kil-Tone Site Removal Assessment
Vineland, New Jersey

Arsenic and Lead Fixed Lab Results
Station Location ID: 012

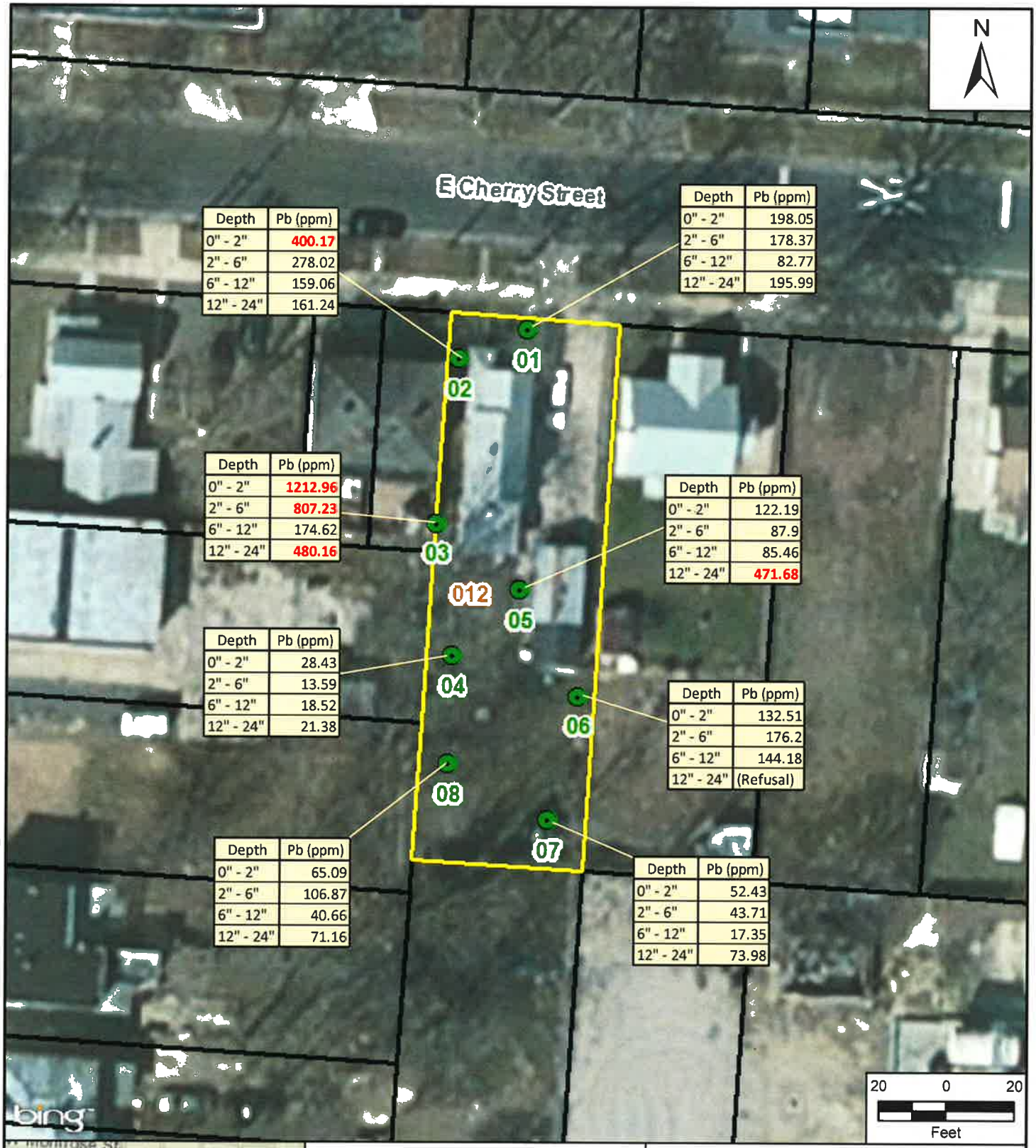
TETRA TECH

Prepared For: joseph.gawarzewski | Prepared By: joel.peters

Coordinate System: NAD 1983 StatePlane New Jersey FIPS 2900 Feet Projection: Transverse Mercator Datum: North American 1983 Units: Foot US

File Path: S:\CADD\ll\9026\0001\S05150140\mxd\Fixed_PB_AS\FIG_X_012_Vineland_511_E_Cherry_DESA.mxd

Date Saved: 5/15/2015



Legend

- Sampling/Borehole Location
- Sampled Parcel

Depth = Inches Below Ground Surface
Pb = Lead
<LOD = Below Level of Detection
ppm = parts per million

Source: Cumberland County Department of Planning and Development NJ Office of Information Technology (NJOIT), Office of Geographic Information Systems (OGIS), 2011, and Bing Maps Aerial Imagery, 2010-2011.
EPA Contract No.: EP-S5-13-01 TDD No.: S05-0010-1501-400

Former Kil-Tone Site Removal Assessment
Vineland, New Jersey

X-Ray Fluorescence Lead Results
Station Location ID: 012

TETRA TECH

Prepared For: joseph.gawarzewski | Prepared By: joel.peters

Coordinate System: NAD 1983 StatePlane New Jersey FIPS 2900 Feet Projection: Transverse Mercator Datum:North American 1983 Units: Foot US

File Path: S:\CADD\ll9026\0001S05150140\mxd\XRF_LeadOnly\FIG_X_012_Vineland_511_E_Cherry_PB.mxd

Date Saved: 5/20/2015

Legend

- Sampling/Borehole Location
- Sampled Parcel

Depth = Inches Below Ground Surface (BGS)
As = Arsenic
Pb = Lead
<LOD = Below Level of Detection
ppm = parts per million

Source: Cumberland County Department of Planning and Development
NJ Office of Information Technology (NJOIT), Office of Geographic Information Systems (OGIS), 2011, and Bing Maps Aerial Imagery, 2010-2011.

EPA Contract No.: EP-S5-13-01 TDD No.: S05-0010-1501-400

Former Kil-Tone Site Removal Assessment
Vineland, New Jersey

Arsenic and Lead Fixed Lab Results
Station Location ID: 013

TETRA TECH

Prepared For: joseph.gawarzewski | Prepared By: joel.peters

File Path: S:\CADD\ti90260001\S05150140\mxd\Fixed_PB_ASIFIG_X_013_Vineland_513_E_Cherry_DESA.mxd

Date Saved: 5/15/2015

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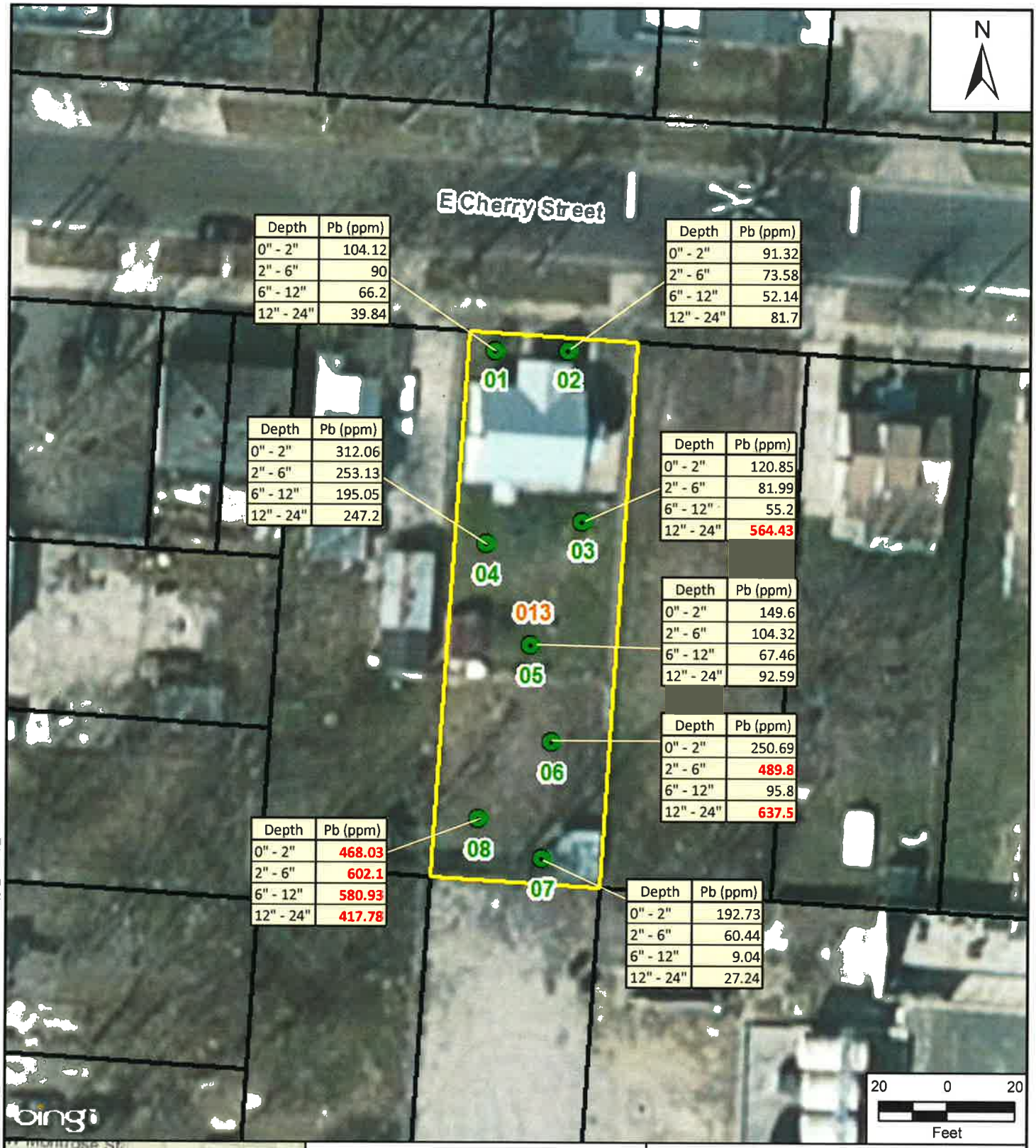

Legend

- Sampling/Borehole Location
- Sampled Parcel

Depth = Inches Below Ground Surface
Pb = Lead
<LOD = Below Level of Detection
ppm = parts per million

Source: Cumberland County Department of Planning and Development NJ Office of Information Technology (NJOIT), Office of Geographic Information Systems (OGIS), 2011, and Bing Maps Aerial Imagery, 2010-2011.

EPA Contract No.: EP-S5-13-01 TDD No.: S05-0010-1501-400

Former Kil-Tone Site Removal Assessment
Vineland, New Jersey

X-Ray Fluorescence Lead Results

Station Location ID: 013

TETRA TECH

Prepared For: joseph.gawarzewski | Prepared By: joel.peters

File Path: S:\CADD\ll\9026\0001\S05150140\mxd\XRF_LeadOnly\FIG_X_013_Vineland_513_E_Cherry_PB.mxd

Date Saved: 5/20/2015

Coordinate System: NAD 1983 StatePlane New Jersey FIPS 2900 Feet Projection: Transverse Mercator Datum: North American 1983 Units: Foot US

Legend

- Sampling/Borehole Location
- Sampled Parcel

Depth = Inches Below Ground Surface (BGS)
As = Arsenic
Pb = Lead
<LOD = Below Level of Detection
ppm = parts per million

Source: Cumberland County Department of Planning and Development, NJ Office of Information Technology (NJOIT), Office of Geographic Information Systems (OGIS), 2011, and Bing Maps Aerial Imagery, 2010-2011.

EPA Contract No.: EP-S5-13-01 TDD No.: S05-0010-1501-400

Former Kil-Tone Site Removal Assessment
Vineland, New Jersey

Arsenic and Lead Fixed Lab Results

Station Location ID: 014

TETRA TECH

Prepared For: joseph.gawarzewski | Prepared By: joel.peters

Coordinate System: NAD 1983 StatePlane New Jersey FIPS 2900 Feet Projection: Transverse Mercator Datum: North American 1983 Units: Foot US

File Path: S:\CADD\ti\9026\0001\S05150140\mxd\Fixed_PB_AS\FIG_X_014_Vineland_527_E_Cherry_DESA.mxd

Date Saved: 5/15/2015

Legend

- Sampling/Borehole Location
- Sampled Parcel

Depth = Inches Below Ground Surface
Pb = Lead
<LOD = Below Level of Detection
ppm = parts per million

Source: Cumberland County Department of Planning and Development NJ Office of Information Technology (NJOIT), Office of Geographic Information Systems (OGIS), 2011, and Bing Maps Aerial Imagery, 2010-2011.
EPA Contract No.: EP-S5-13-01 TDD No.: S05-0010-1501-400

Former Kil-Tone Site Removal Assessment
Vineland, New Jersey

X-Ray Fluorescence Lead Results
Station Location ID: 014

TETRA TECH

Prepared For: joseph.gawarzewski | Prepared By: joel.peters

Coordinate System: NAD 1983 StatePlane New Jersey FIPS 2900 Feet Projection: Transverse Mercator Datum: North American 1983 Units: Foot US

File Path: S:\CADD\ft9026\0001\S05150140\mxd\XRF_LeadOnly\FIG_X_014_Vineland_527_E_Cherry_PB.mxd

Date Saved: 5/20/2015

Legend

- Sampling/Borehole Location
- Sampled Parcel

Depth = Inches Below Ground Surface (BGS)
As = Arsenic
Pb = Lead
<LOD = Below Level of Detection
ppm = parts per million

Source: Cumberland County Department of Planning and Development NJ Office of Information Technology (NJOIT), Office of Geographic Information Systems (OGIS), 2011, and Bing Maps Aerial Imagery, 2010-2011.

EPA Contract No.: EP-S5-13-01 TDD No.: S05-0010-1501-400

Former Kil-Tone Site Removal Assessment
Vineland, New Jersey

Arsenic and Lead Fixed Lab Results

Station Location ID: 015

TETRA TECH

Prepared For: joseph.gawarzewski | Prepared By: joel.peters

Coordinate System: NAD 1983 StatePlane New Jersey FIPS 2900 Feet Projection: Transverse Mercator Datum: North American 1983 Units: Foot US

File Path: S:\CADD\ll\902600015051501400mxd\Fixed_PB_AS\FIG_X_015_Vineland_610_S_6th_DESA.mxd

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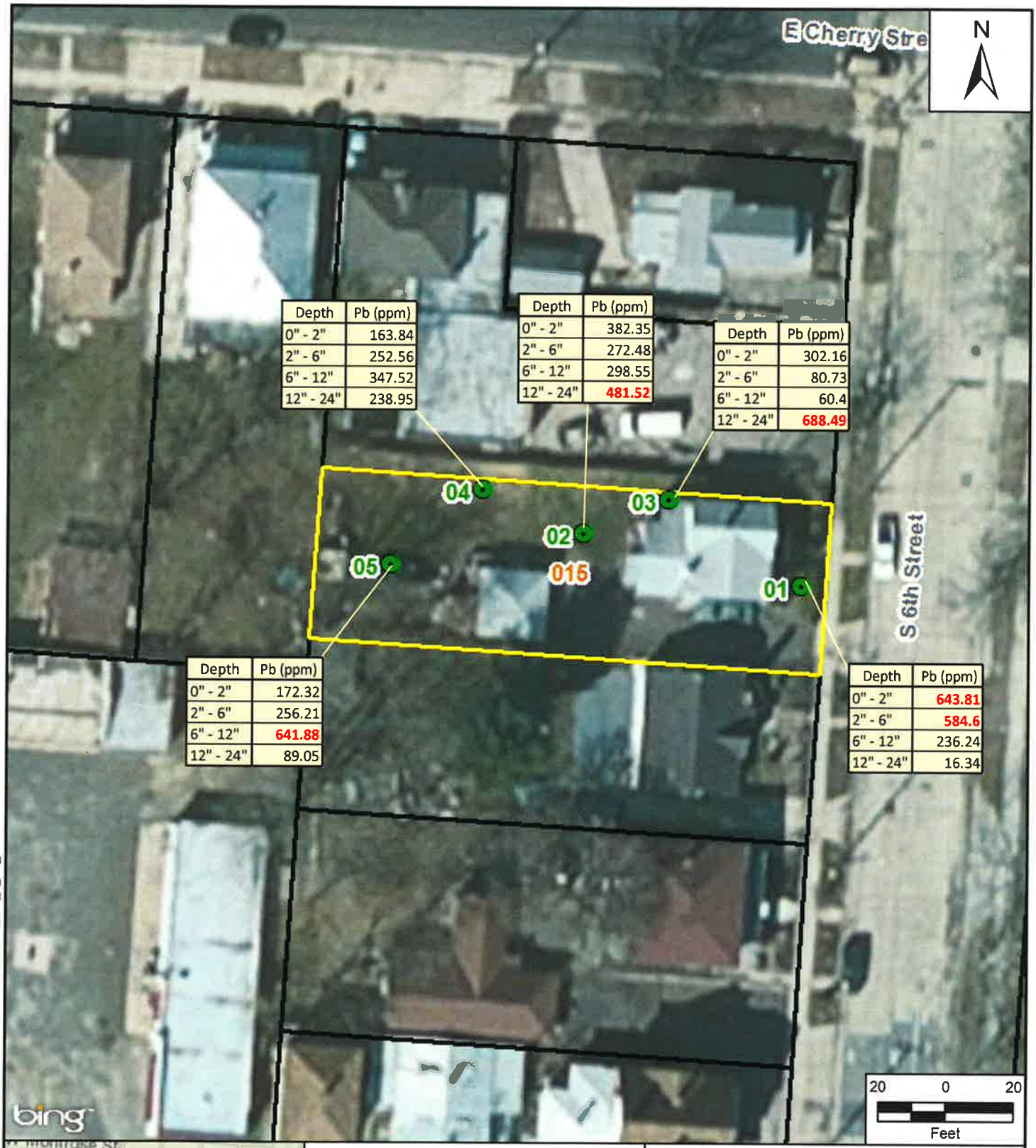


Depth	Pb (ppm)
0" - 2"	163.84
2" - 6"	252.56
6" - 12"	347.52
12" - 24"	238.95

Depth	Pb (ppm)
0" - 2"	382.35
2" - 6"	272.48
6" - 12"	298.55
12" - 24"	**481.52**

Depth	Pb (ppm)
0" - 2"	302.16
2" - 6"	80.73
6" - 12"	60.4
12" - 24"	**688.49**

Depth	Pb (ppm)
0" - 2"	172.32
2" - 6"	256.21
6" - 12"	**641.88**
12" - 24"	89.05

Depth	Pb (ppm)
0" - 2"	**643.81**
2" - 6"	**584.6**
6" - 12"	236.24
12" - 24"	16.34

Legend

- Sampling/Borehole Location
- Sampled Parcel

Depth = Inches Below Ground Surface
Pb = Lead
<LOD = Below Level of Detection
ppm = parts per million

Source: Cumberland County Department of Planning and Development NJ Office of Information Technology (NJOIT), Office of Geographic Information Systems (OGIS), 2011, and Bing Maps Aerial Imagery, 2010-2011.

EPA Contract No.: EP-S5-13-01 TDD No.: S05-0010-1501-400

Former Kil-Tone Site Removal Assessment
Vineland, New Jersey

X-Ray Fluorescence Lead Results

Station Location ID: 015

TETRA TECH

Prepared For: joseph.gawarzewski | Prepared By: joel.peters

Coordinate System: NAD 1983 StatePlane New Jersey FIPS 2900 Feet Projection: Transverse Mercator Datum: North American 1983 Units: Foot US

File Path: S:\CADD\ti\902610001\S05150140\mxd\XRF_LeadOnly\FIG_X_015_Vineland_610_S_6th_PB.mxd

Date Saved: 5/20/2015

Legend

- Sampling/Borehole Location
- Sampled Parcel

Depth = Inches Below Ground Surface (BGS)
As = Arsenic
Pb = Lead
<LOD = Below Level of Detection
ppm = parts per million

Source: Cumberland County Department of Planning and Development NJ Office of Information Technology (NJOIT), Office of Geographic Information Systems (OGIS), 2011, and Bing Maps Aerial Imagery, 2010-2011.

EPA Contract No.: EP-S5-13-01 TDD No.: S05-0010-1501-400

Former Kil-Tone Site Removal Assessment
Vineland, New Jersey

Arsenic and Lead Fixed Lab Results

Station Location ID: 016

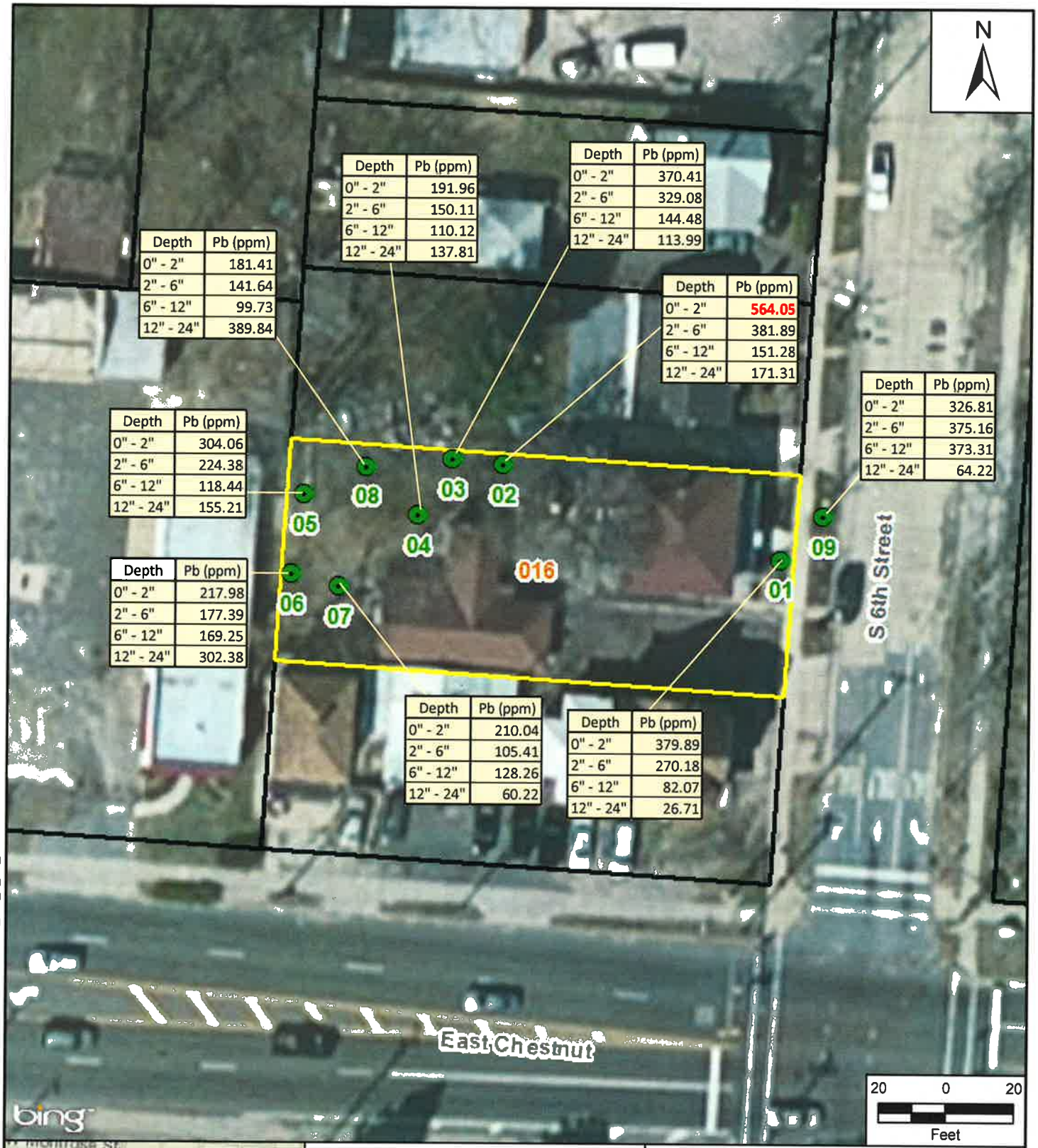
TETRA TECH

Prepared For: joseph.gawarzewski | Prepared By: joel.peters

Coordinate System: NAD 1983 StatePlane New Jersey FIPS 2900 Feet Projection: Transverse Mercator Datum: North American 1983 Units: Foot US

File Path: S:\CADD\ti\902610001\S05150140\mxd\Fixed_PB_ASIFIG_X_016_Vineland_614_S_6th_DESA.mxd

Date Saved: 5/15/2015



Legend

- Sampling/Borehole Location
- Sampled Parcel

Depth = Inches Below Ground Surface
Pb = Lead
<LOD = Below Level of Detection
ppm = parts per million

Source: Cumberland County Department of Planning and Development NJ Office of Information Technology (NJOIT), Office of Geographic Information Systems (OGIS), 2011, and Bing Maps Aerial Imagery, 2010-2011.

EPA Contract No.: EP-S5-13-01 TDD No.: S05-0010-1501-400

Former Kil-Tone Site Removal Assessment
Vineland, New Jersey

X-Ray Fluorescence Lead Results
Station Location ID: 016

TETRA TECH

Prepared For: joseph.gawarzewski | Prepared By: joel.peters

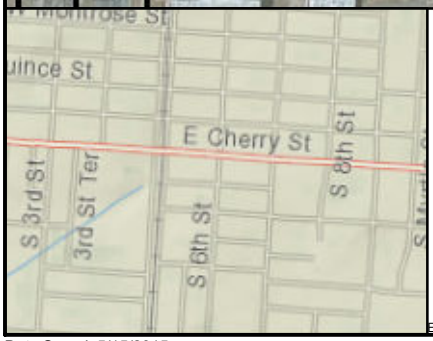
Coordinate System: NAD 1983 StatePlane New Jersey FIPS 2900 Feet Projection: Transverse Mercator Datum: North American 1983 Units: Foot US

File Path: S:\CADD\ll\9026\0001\S05150140\mxd\XRF_LeadOnly\FIG_X_016_Vineland_614_S_6th_PB.mxd

Date Saved: 5/20/2015

Depth	As (ppm)	Pb (ppm)
0" - 2"	6.4	57
2" - 6"	5.7	47
6" - 12"	3.1	8.3
12" - 24"	3.3	8.7

Depth	As (ppm)	Pb (ppm)
0" - 2"	4.2	39
2" - 6"	3.2	26
6" - 12"	2.9	19
12" - 24"	1.5	5.1



Legend

- Sampling/Borehole Location
- Sampled Parcel

Depth = Inches Below Ground Surface (BGS)
As = Arsenic
Pb = Lead
<LOD = Below Level of Detection
ppm = parts per million

Source: Cumberland County Department of Planning and Development
NJ Office of Information Technology (NJOIT), Office of Geographic Information Systems (OGIS), 2011, and Bing Maps Aerial Imagery, 2010-2011.
EPA Contract No.: EP-S5-13-01 TDD No.: S05-0010-1501-400

Former Kil-Tone Site Removal Assessment
Vineland, New Jersey

Arsenic and Lead Fixed Lab Results
Station Location ID: 018

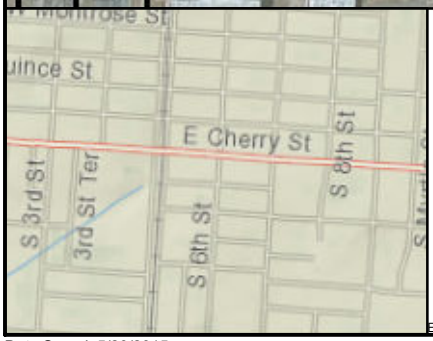
TETRA TECH

Prepared For: joseph.gawarzewski | Prepared By: joel.peters

File Path: S:\CADD\I\9026\0001\S051501400\mxd\Fixed_PB_AS\FIG_X_018_Vineland_LandisPark_DESA.mxd

Date Saved: 5/15/2015

Coordinate System: NAD 1983 StatePlane New Jersey FIPS 2900 Feet Projection: Transverse Mercator Datum:North American 1983 Units: Foot US



Legend

- Sampling/Borehole Location
- Sampled Parcel

Depth = Inches Below Ground Surface
Pb = Lead
<LOD = Below Level of Detection
ppm = parts per million

Source: Cumberland County Department of Planning and Development NJ Office of Information Technology (NJOIT), Office of Geographic Information Systems (OGIS), 2011, and Bing Maps Aerial Imagery, 2010-2011.
EPA Contract No.: EP-S5-13-01 TDD No.: S05-0010-1501-400

Former Kil-Tone Site Removal Assessment
Vineland, New Jersey

X-Ray Fluorescence Lead Results
Station Location ID: 018

TETRA TECH

Prepared For: joseph.gawarzewski | Prepared By: joel.peters

File Path: S:\CADD\Il\9026\0001S051501400\mxd\XRF_LeadOnly\FIG_X_018_Vineland_LandisPark_PB.mxd

Date Saved: 5/20/2015

Coordinate System: NAD 1983 StatePlane New Jersey FIPS 2900 Feet Projection: Transverse Mercator Datum:North American 1983 Units: Foot US

Legend

- Sampling/Borehole Location
- Sampled Parcel

Depth = Inches Below Ground Surface (BGS)
As = Arsenic
Pb = Lead
<LOD = Below Level of Detection
ppm = parts per million

Source: Cumberland County Department of Planning and Development NJ Office of Information Technology (NJOIT), Office of Geographic Information Systems (OGIS), 2011, and Bing Maps Aerial Imagery, 2010-2011.

EPA Contract No.: EP-S5-13-01 TDD No.: S05-0010-1501-400

Former Kil-Tone Site Removal Assessment
Vineland, New Jersey

Arsenic and Lead Fixed Lab Results

Station Location ID: 020

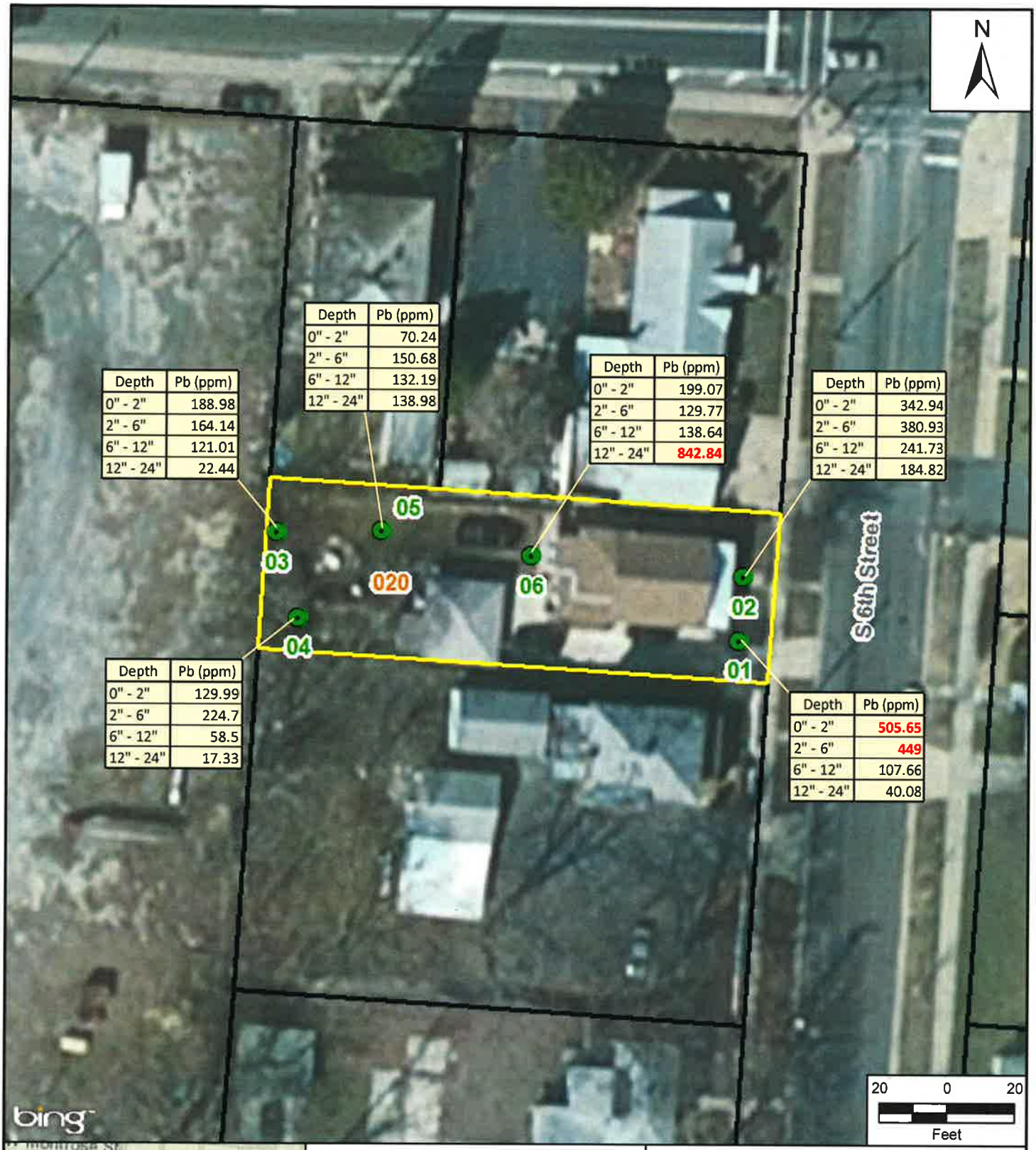
TETRA TECH

Prepared For: joseph.gawarzewski | Prepared By: joel.peters

Coordinate System: NAD 1983 StatePlane New Jersey FIPS 2900 Feet Projection: Transverse Mercator Datum: North American 1983 Units: Foot US

File Path: S:\CADD\ll\902610001\S05150140\mxd\Fixed_PB_AS\FIG_X_020_Vineland_708_S_6th_DESA.mxd

Date Saved: 5/15/2015



Depth	Pb (ppm)
0" - 2"	188.98
2" - 6"	164.14
6" - 12"	121.01
12" - 24"	22.44

Depth	Pb (ppm)
0" - 2"	70.24
2" - 6"	150.68
6" - 12"	132.19
12" - 24"	138.98

Depth	Pb (ppm)
0" - 2"	199.07
2" - 6"	129.77
6" - 12"	138.64
12" - 24"	842.84

Depth	Pb (ppm)
0" - 2"	342.94
2" - 6"	380.93
6" - 12"	241.73
12" - 24"	184.82

Depth	Pb (ppm)
0" - 2"	129.99
2" - 6"	224.7
6" - 12"	58.5
12" - 24"	17.33

Depth	Pb (ppm)
0" - 2"	505.65
2" - 6"	449
6" - 12"	107.66
12" - 24"	40.08

Legend

- Sampling/Borehole Location
- Sampled Parcel

Depth = Inches Below Ground Surface
Pb = Lead
<LOD = Below Level of Detection
ppm = parts per million

Source: Cumberland County Department of Planning and Development NJ Office of Information Technology (NJOIT), Office of Geographic Information Systems (OGIS), 2011, and Bing Maps Aerial Imagery, 2010-2011.

EPA Contract No.: EP-S5-13-01 TDD No.: S05-0010-1501-400

Coordinate System: NAD 1983 StatePlane New Jersey FIPS 2900 Feet Projection: Transverse Mercator Datum: North American 1983 Units: Foot US

Former Kil-Tone Site Removal Assessment
Vineland, New Jersey

X-Ray Fluorescence Lead Results

Station Location ID: 020

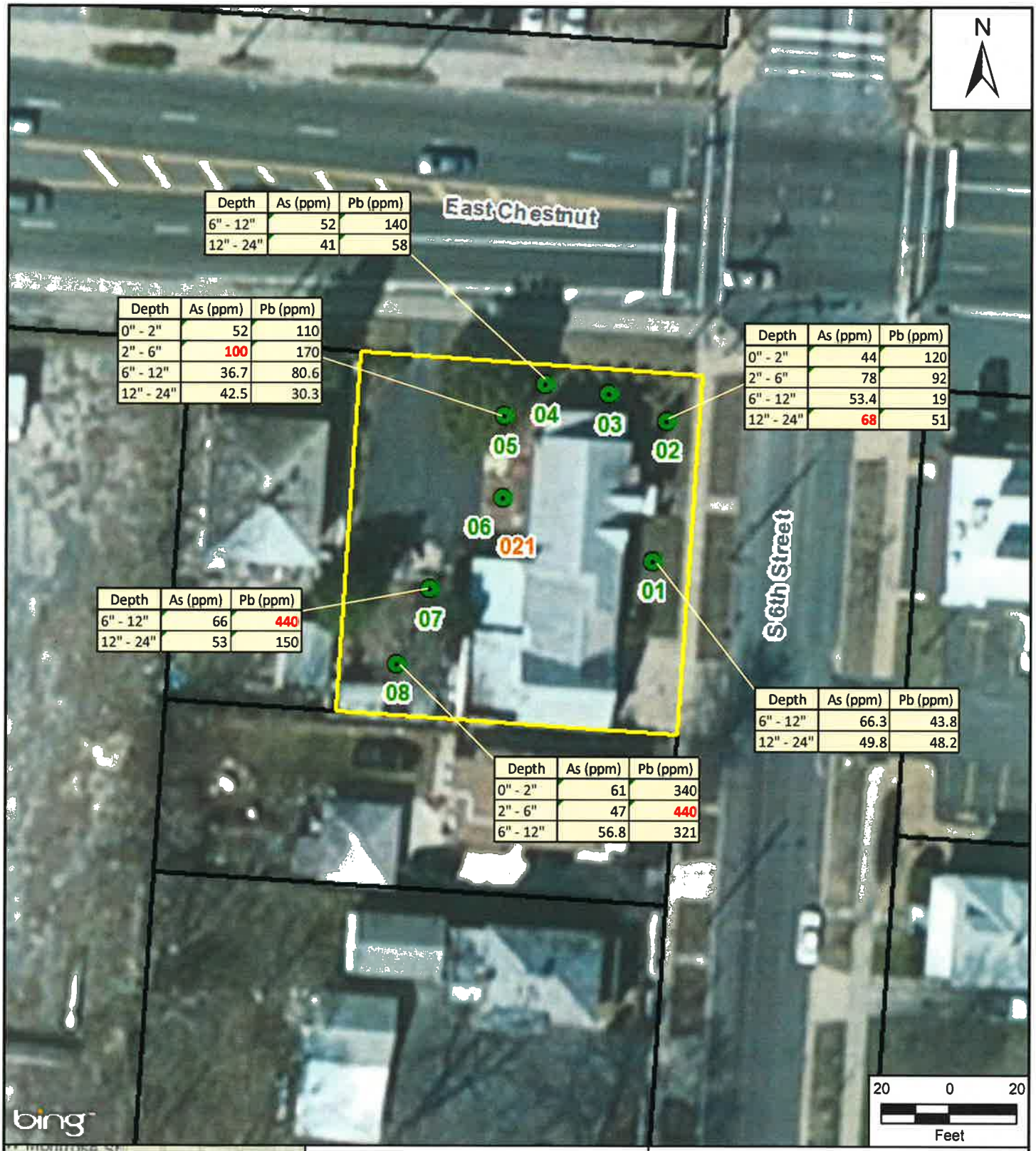
TETRA TECH

Prepared For: joseph.gawarzewski

Prepared By: joel.peters

File Path: S:\CADD\ll9026\0001\S05150140\mxd\XRF_LeadOnly\FIG_X_020_Vineland_708_S_6th_PB.mxd

Date Saved: 5/20/2015



Depth	As (ppm)	Pb (ppm)
6" - 12"	52	140
12" - 24"	41	58

Depth	As (ppm)	Pb (ppm)
0" - 2"	52	110
2" - 6"	100	170
6" - 12"	36.7	80.6
12" - 24"	42.5	30.3

Depth	As (ppm)	Pb (ppm)
0" - 2"	44	120
2" - 6"	78	92
6" - 12"	53.4	19
12" - 24"	68	51

Depth	As (ppm)	Pb (ppm)
6" - 12"	66	440
12" - 24"	53	150

Depth	As (ppm)	Pb (ppm)
6" - 12"	66.3	43.8
12" - 24"	49.8	48.2

Depth	As (ppm)	Pb (ppm)
0" - 2"	61	340
2" - 6"	47	440
6" - 12"	56.8	321

Legend

- Sampling/Borehole Location
- Sampled Parcel

Depth = Inches Below Ground Surface (BGS)
As = Arsenic
Pb = Lead
<LOD = Below Level of Detection
ppm = parts per million

Source: Cumberland County Department of Planning and Development NJ Office of Information Technology (NJOIT), Office of Geographic Information Systems (OGIS), 2011, and Bing Maps Aerial Imagery, 2010-2011.
EPA Contract No.: EP-S5-13-01 TDD No.: S05-0010-1501-400

Former Kil-Tone Site Removal Assessment
Vineland, New Jersey

Arsenic and Lead Fixed Lab Results
Station Location ID: 021

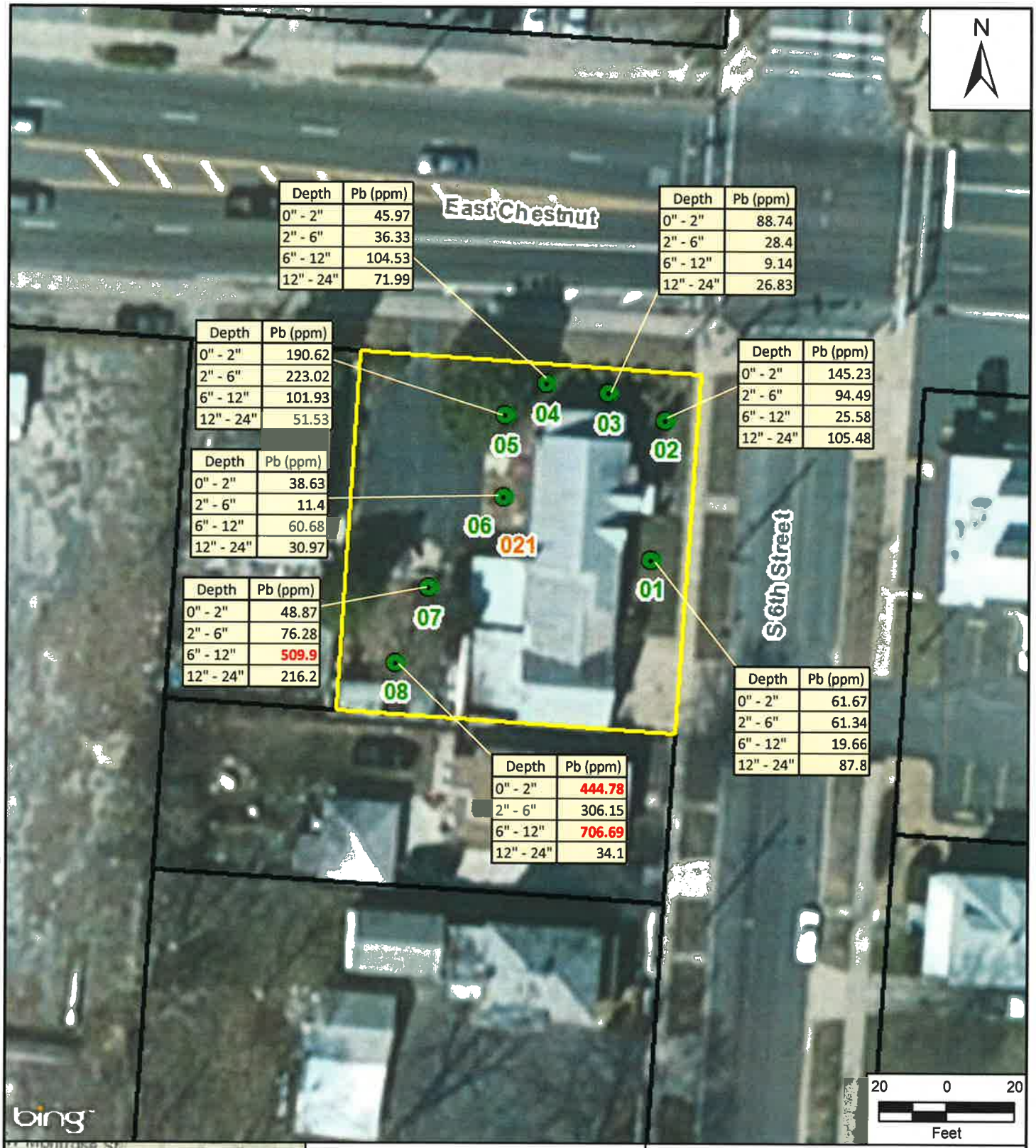
TETRA TECH

Prepared For: joseph.gawarzewski | Prepared By: joel.peters

File Path: S:\CADD\R09026\0001\S05150140\mxd\Fixed_PB_AS\FIG_X_021_Vineland_700_S_6th_DESA.mxd

Date Saved: 5/15/2015

Coordinate System: NAD 1983 StatePlane New Jersey FIPS 2900 Feet Projection: Transverse Mercator Datum: North American 1983 Units: Foot US



Legend

- Sampling/Borehole Location
- Sampled Parcel

Depth = Inches Below Ground Surface
Pb = Lead
<LOD = Below Level of Detection
ppm = parts per million

Source: Cumberland County Department of Planning and Development NJ Office of Information Technology (NJOIT), Office of Geographic Information Systems (OGIS), 2011, and Bing Maps Aerial Imagery, 2010-2011.
EPA Contract No.: EP-S5-13-01 TDD No.: S05-0010-1501-400

Former Kil-Tone Site Removal Assessment
Vineland, New Jersey

X-Ray Fluorescence Lead Results
Station Location ID: 021

TETRA TECH

Prepared For: joseph.gawarzewski | Prepared By: joel.peters

File Path: S:\CADD\II\9026\0001\S05\501400\mxd\XRF_LeadOnly\FIG_X_021_Vineland_700_S_6th_PB.mxd

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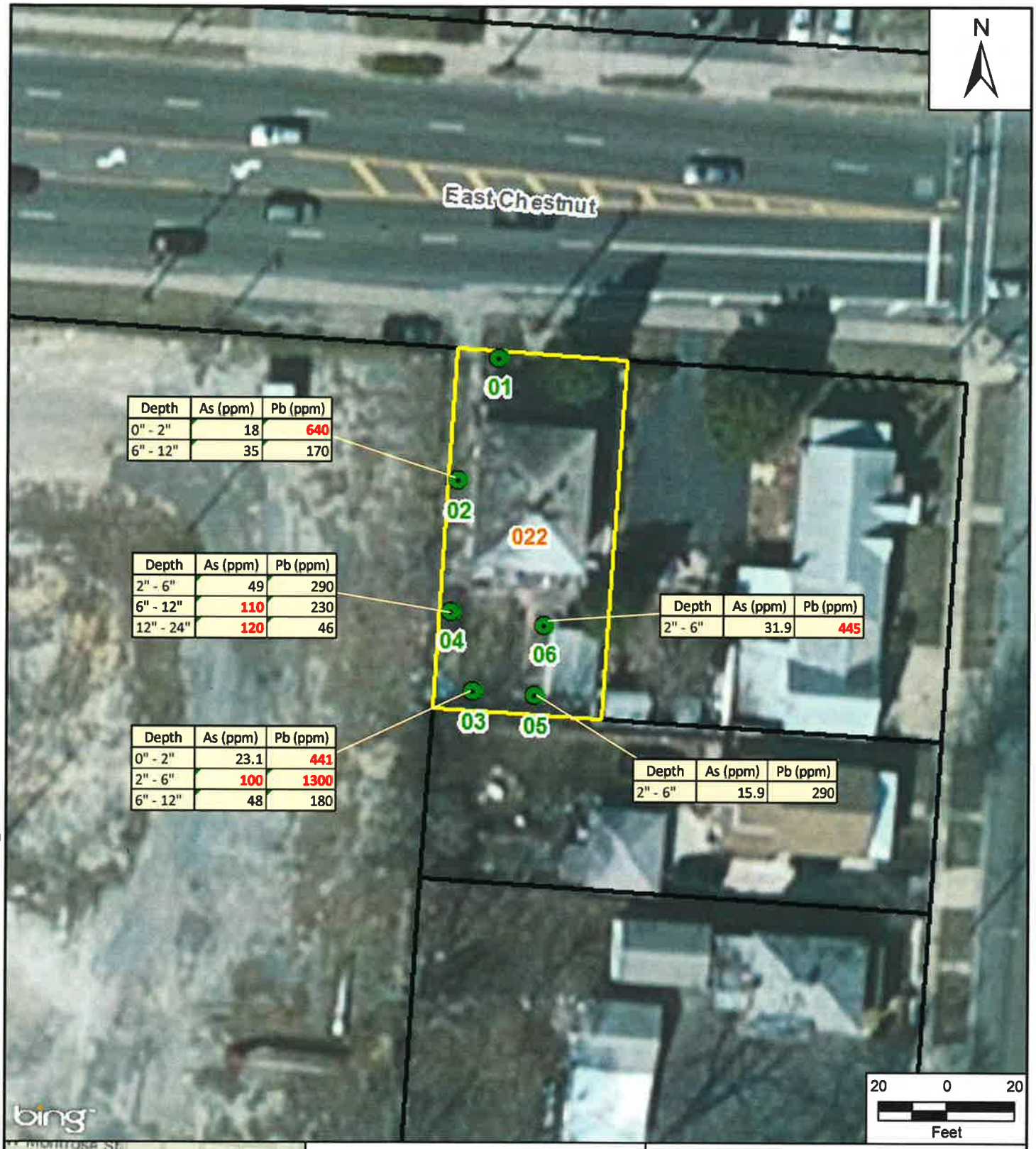


Legend

- Sampling/Borehole Location
- Sampled Parcel

Depth = Inches Below Ground Surface (BGS)
As = Arsenic
Pb = Lead
<LOD = Below Level of Detection
ppm = parts per million

Source: Cumberland County Department of Planning and Development NJ Office of Information Technology (NJOIT), Office of Geographic Information Systems (OGIS), 2011, and Bing Maps Aerial Imagery, 2010-2011.

EPA Contract No.: EP-S5-13-01 TDD No.: S05-0010-1501-400

Former Kil-Tone Site Removal Assessment
Vineland, New Jersey

Arsenic and Lead Fixed Lab Results

Station Location ID: 022

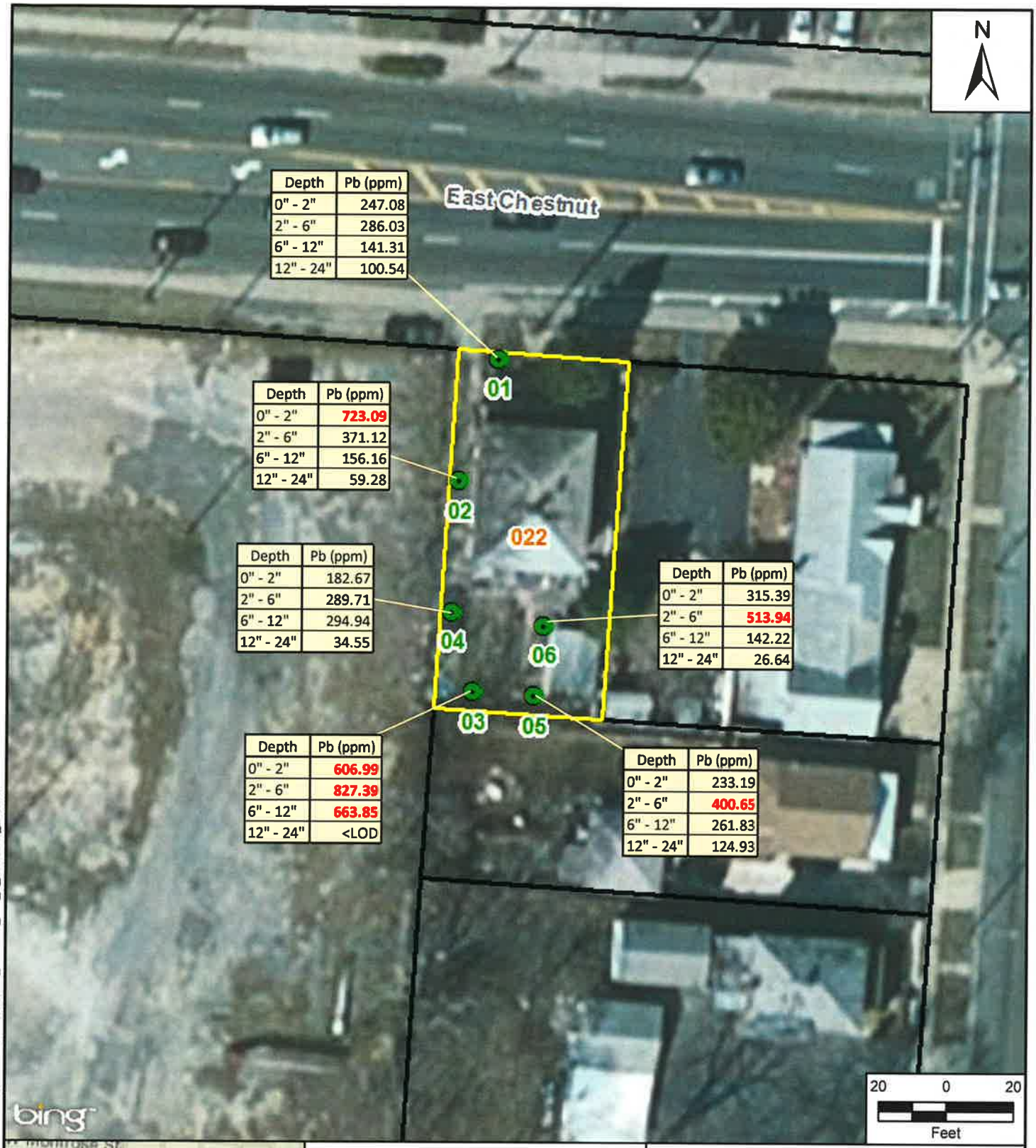
TETRA TECH

Prepared For: joseph.gawarzewski | Prepared By: joel.peters

Coordinate System: NAD 1983 StatePlane New Jersey FIPS 2900 Feet Projection: Transverse Mercator Datum: North American 1983 Units: Foot US

File Path: S:\CADD\1902610001\S05150140\mxd\Fixed_PB_AS\FIG_X_022_Vineland_531_E_Chestnut_DESA.mxd

Date Saved: 5/15/2015



Legend

- Sampling/Borehole Location
- Sampled Parcel

Depth = Inches Below Ground Surface
Pb = Lead
<LOD = Below Level of Detection
ppm = parts per million

Source: Cumberland County Department of Planning and Development NJ Office of Information Technology (NJOIT), Office of Geographic Information Systems (OGIS), 2011, and Bing Maps Aerial Imagery, 2010-2011.

EPA Contract No.: EP-S5-13-01 TDD No.: S05-0010-1501-400

Former Kil-Tone Site Removal Assessment
Vineland, New Jersey

X-Ray Fluorescence Lead Results
Station Location ID: 022

TETRA TECH

Prepared For: joseph.gawarzewski | Prepared By: joel.peters

Coordinate System: NAD 1983 StatePlane New Jersey FIPS 2900 Feet Projection: Transverse Mercator Datum: North American 1983 Units: Foot US

File Path: S:\CADD\N9026\0001\S05150140\mxd\XRF_LeadOnly\FIG_X_022_Vineland_531_E_Chestnut_PB.mxd

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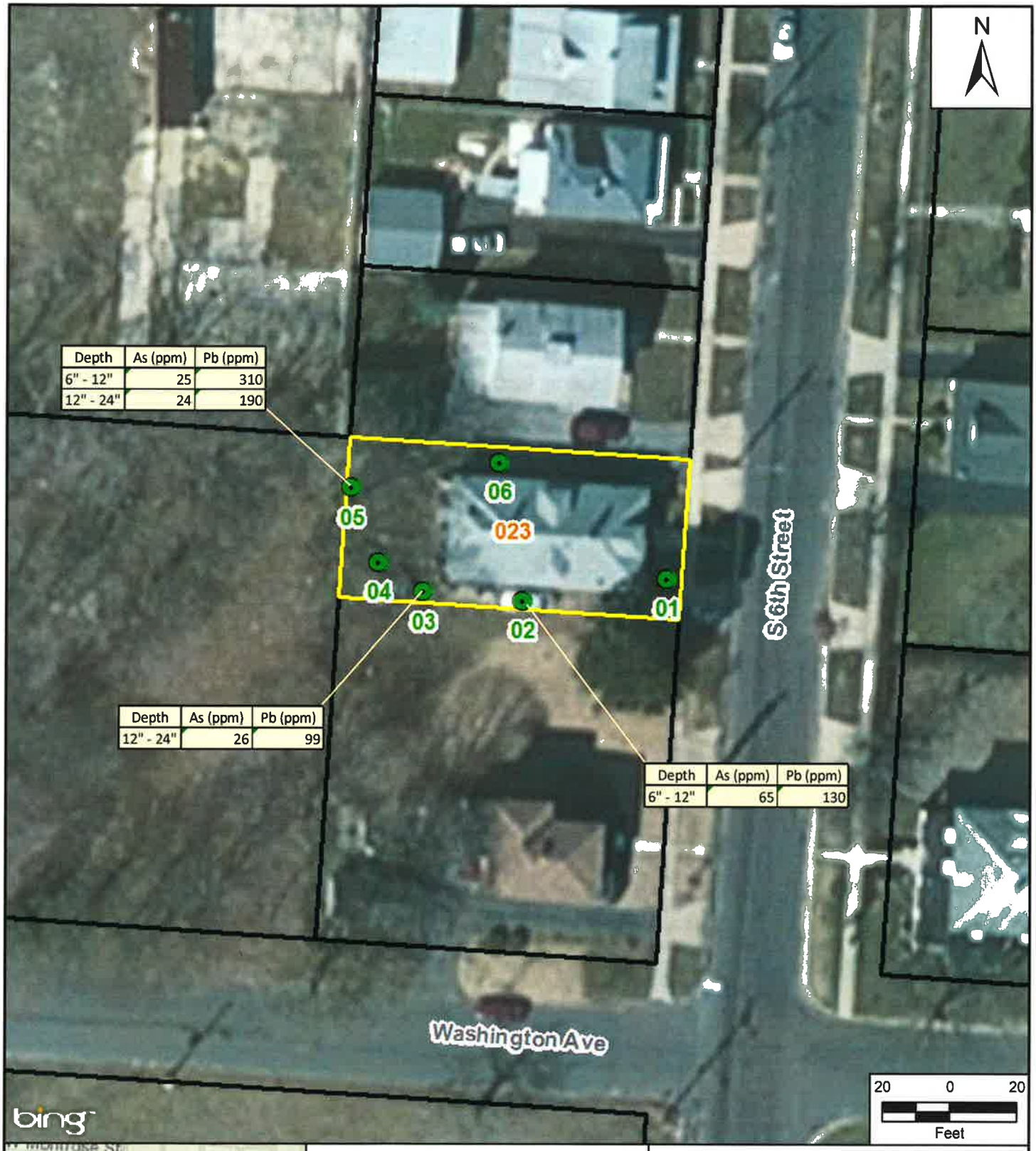


Legend

- Sampling/Borehole Location
- Sampled Parcel

Depth = Inches Below Ground Surface (BGS)
As = Arsenic
Pb = Lead
<LOD = Below Level of Detection
ppm = parts per million

Source: Cumberland County Department of Planning and Development, NJ Office of Information Technology (NJOIT), Office of Geographic Information Systems (OGIS), 2011, and Bing Maps Aerial Imagery, 2010-2011.

EPA Contract No.: EP-S5-13-01 TDD No.: S05-0010-1501-400

Former Kil-Tone Site Removal Assessment
Vineland, New Jersey

Arsenic and Lead Fixed Lab Results

Station Location ID: 023

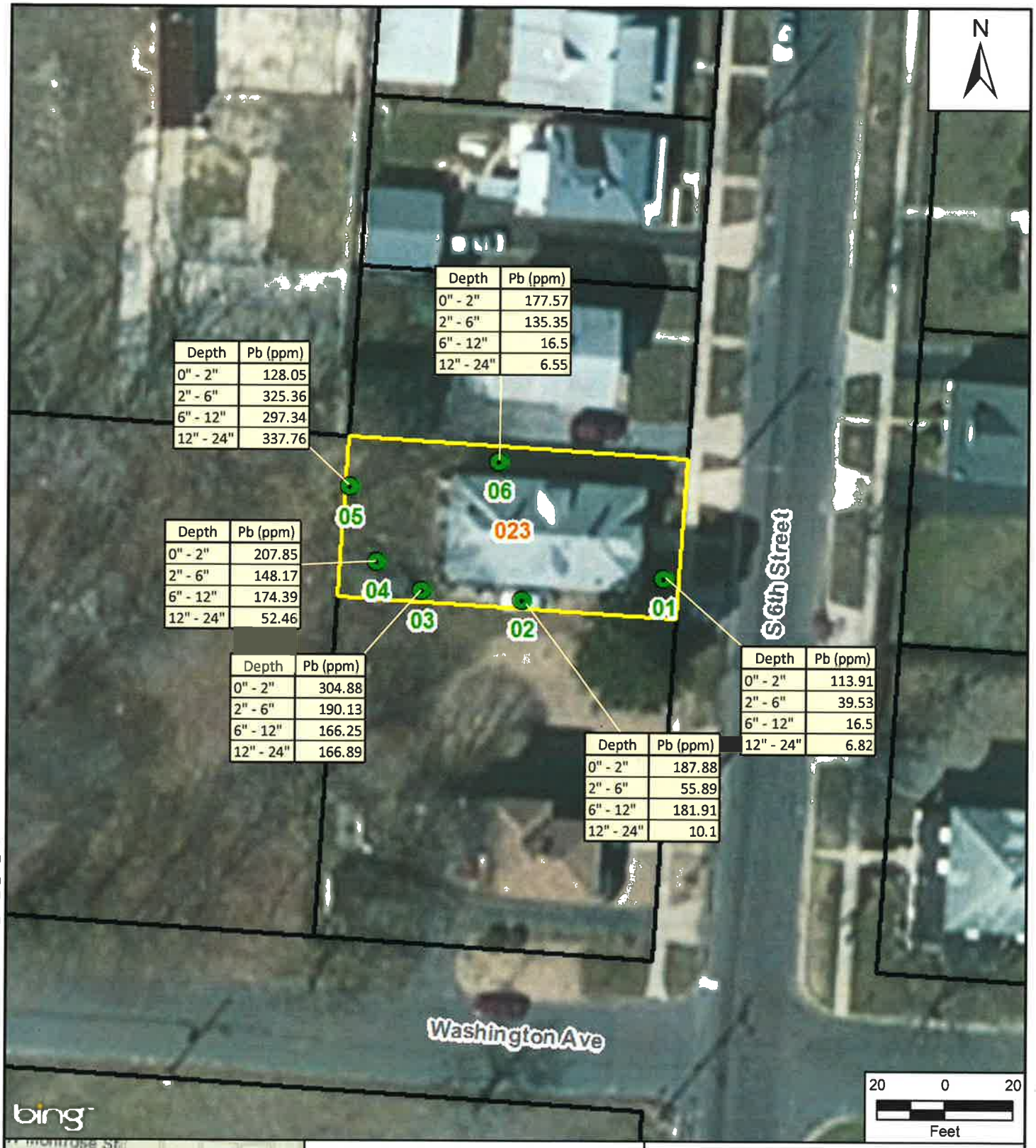
TETRA TECH

Prepared For: joseph.gawarzewski | Prepared By: joel.peters

File Path: S:\CADD\ll\9026\0001\S05150140\mxd\Fixed_PB_ASFIG_X_023_Vineland_728_S_6th_DESA.mxd

Date Saved: 5/15/2015

Coordinate System: NAD 1983 StatePlane New Jersey FIPS 2900 Feet Projection: Transverse Mercator Datum: North American 1983 Units: Foot US



Legend

- Sampling/Borehole Location
- Sampled Parcel

Depth = Inches Below Ground Surface
Pb = Lead
<LOD = Below Level of Detection
ppm = parts per million

Source: Cumberland County Department of Planning and Development NJ Office of Information Technology (NJOIT), Office of Geographic Information Systems (OGIS), 2011, and Bing Maps Aerial Imagery, 2010-2011.

EPA Contract No.: EP-S5-13-01 TDD No.: S05-0010-1501-400

Former Kil-Tone Site Removal Assessment
Vineland, New Jersey

X-Ray Fluorescence Lead Results

Station Location ID: 023

TETRA TECH

Prepared For: joseph.gawarzewski | Prepared By: joel.peters

Coordinate System: NAD 1983 StatePlane New Jersey FIPS 2900 Feet Projection: Transverse Mercator Datum: North American 1983 Units: Feet US

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Date Saved: 5/20/2015

Legend

- Sampling/Borehole Location
- Sampled Parcel

Depth = Inches Below Ground Surface (BGS)
As = Arsenic
Pb = Lead
<LOD = Below Level of Detection
ppm = parts per million

Source: Cumberland County Department of Planning and Development, NJ Office of Information Technology (NJOIT), Office of Geographic Information Systems (OGIS), 2011, and Bing Maps Aerial Imagery, 2010-2011.

EPA Contract No.: EP-S5-13-01 TDD No.: S05-0010-1501-400

Former Kil-Tone Site Removal Assessment
Vineland, New Jersey

Arsenic and Lead Fixed Lab Results

Station Location ID: 025

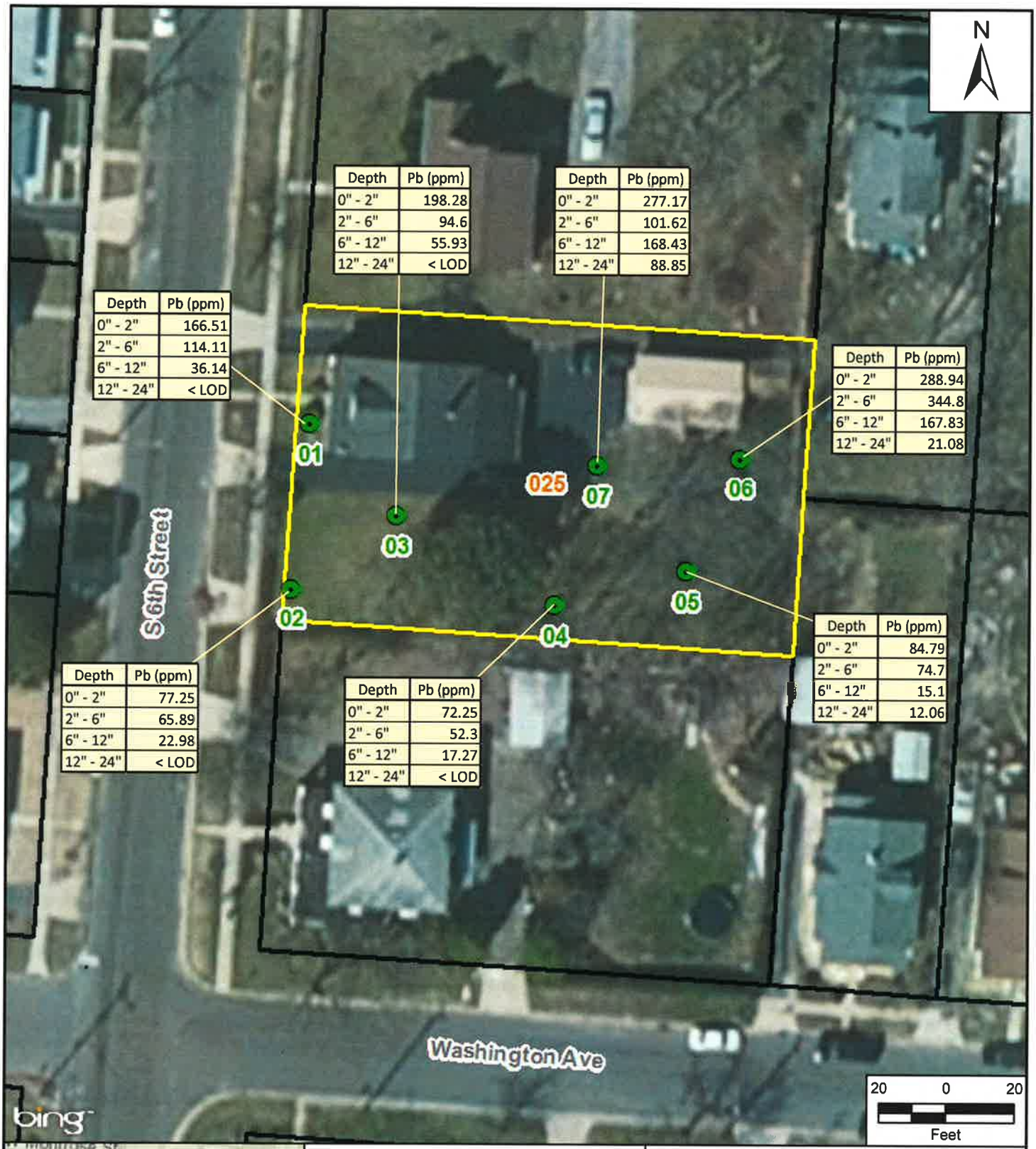
TETRA TECH

Prepared For: joseph.gawarzewski | Prepared By: joel.peters

Coordinate System: NAD 1983 StatePlane New Jersey FIPS 2900 Feet Projection: Transverse Mercator Datum: North American 1983 Units: Foot US

File Path: S:\CADD\N9026\0001\S05150140\mxd\Fixed_PB_AS\FIG_X_025_Vineland_727_S_6th_DESA.mxd

Date Saved: 5/15/2015



Legend

- Sampling/Borehole Location
- Sampled Parcel

Depth = Inches Below Ground Surface
Pb = Lead
<LOD = Below Level of Detection
ppm = parts per million

Source: Cumberland County Department of Planning and Development NJ Office of Information Technology (NJOIT), Office of Geographic Information Systems (OGIS), 2011, and Bing Maps Aerial Imagery, 2010-2011.

EPA Contract No.: EP-S5-13-01 TDD No.: S05-0010-1501-400

Former Kil-Tone Site Removal Assessment
Vineland, New Jersey

X-Ray Fluorescence Lead Results
Station Location ID: 025

TETRA TECH

Prepared For: joseph.gawarzewski | Prepared By: joel.peters

Coordinate System: NAD 1983 StatePlane New Jersey FIPS 2900 Feet Projection: Transverse Mercator Datum: North American 1983 Units: Foot US

File Path: S:\CADD\ll\902610001\S05150140\mxd\XRF_LeadOnly\FIG_X_025_Vineland_727_S_6th_PB.mxd

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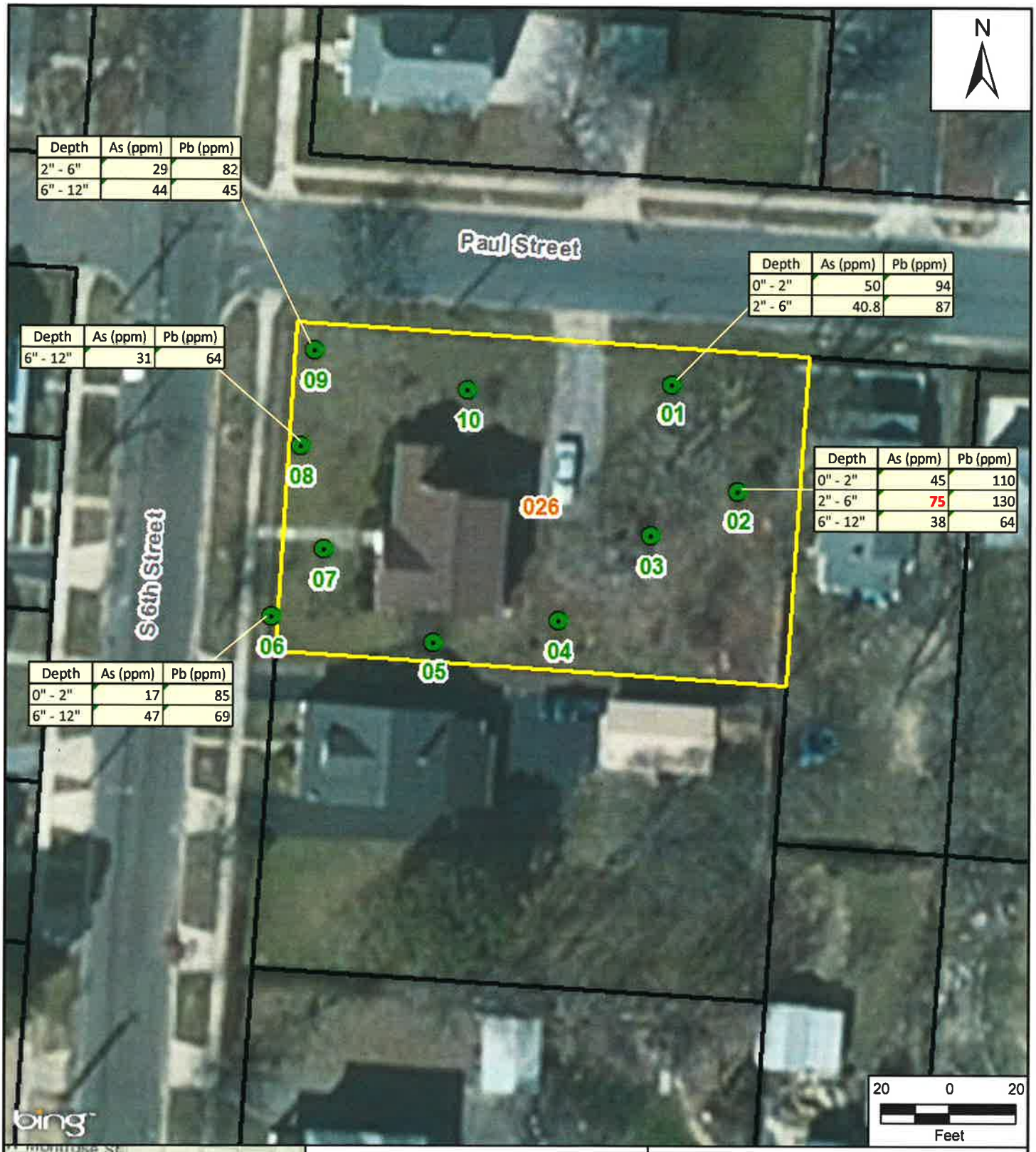


Depth	As (ppm)	Pb (ppm)
2" - 6"	29	82
6" - 12"	44	45

Depth	As (ppm)	Pb (ppm)
0" - 2"	50	94
2" - 6"	40.8	87

Depth	As (ppm)	Pb (ppm)
6" - 12"	31	64

Depth	As (ppm)	Pb (ppm)
0" - 2"	45	110
2" - 6"	75	130
6" - 12"	38	64

Depth	As (ppm)	Pb (ppm)
0" - 2"	17	85
6" - 12"	47	69

Legend

- Sampling/Borehole Location
- Sampled Parcel

Depth = Inches Below Ground Surface (BGS)
As = Arsenic
Pb = Lead
<LOD = Below Level of Detection
ppm = parts per million

Source: Cumberland County Department of Planning and Development NJ Office of Information Technology (NJOIT), Office of Geographic Information Systems (OGIS), 2011, and Bing Maps Aerial Imagery, 2010-2011.

EPA Contract No.: EP-S5-13-01 TDD No.: S05-0010-1501-400

Former Kil-Tone Site Removal Assessment
Vineland, New Jersey

Arsenic and Lead Fixed Lab Results

Station Location ID: 026

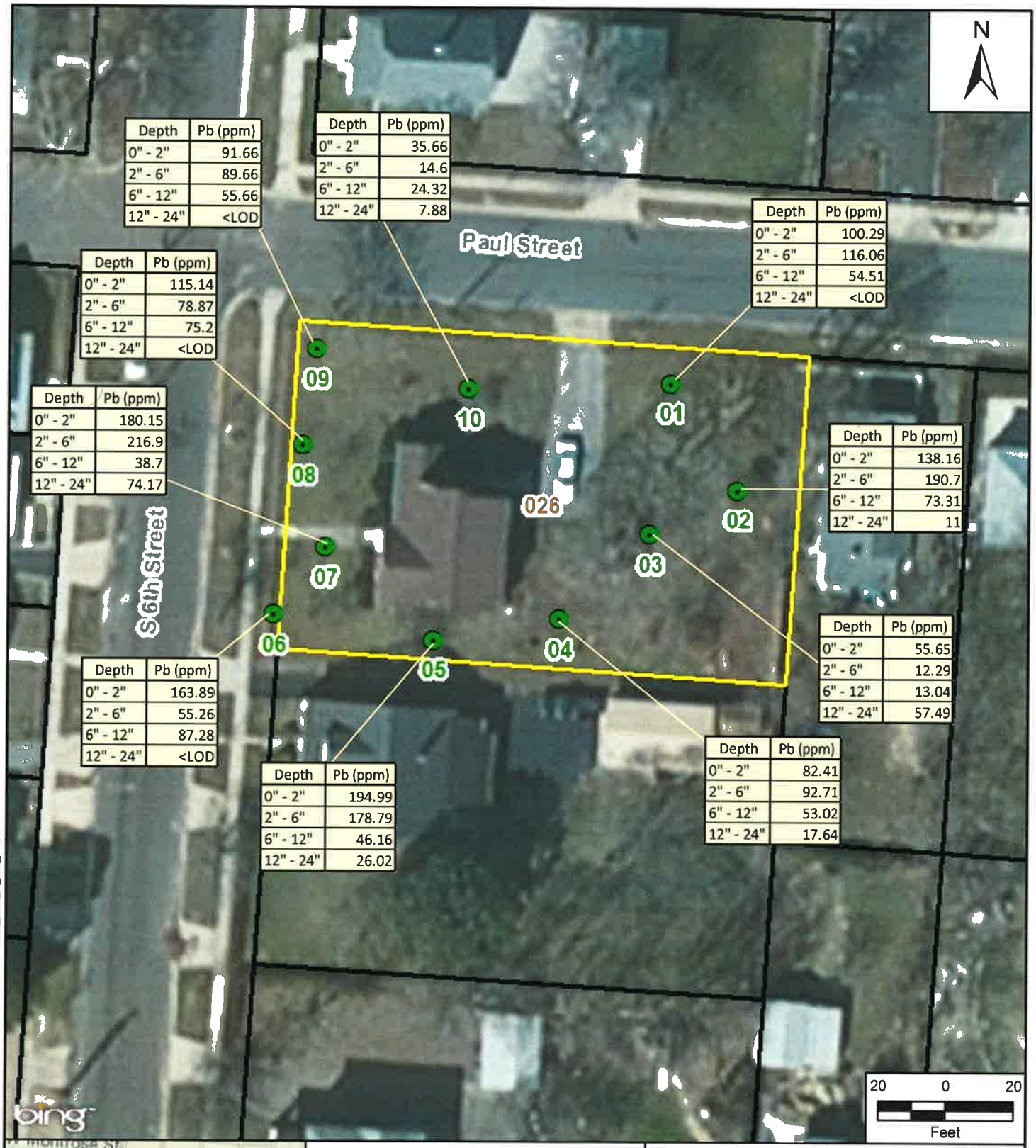
TETRA TECH

Prepared For: joseph.gawarzewski | Prepared By: joel.peters

Coordinate System: NAD 1983 StatePlane New Jersey FIPS 2900 Feet Projection: Transverse Mercator Datum: North American 1983 Units: Feet US

File Path: S:\CADD\ft90260001S05150140\mxd\Fixed_PB_ASIFIG_X_026_Vineland_723_S_6th_DESA.mxd

Date Saved: 5/15/2015



Depth	Pb (ppm)
0" - 2"	91.66
2" - 6"	89.66
6" - 12"	55.66
12" - 24"	<LOD

Depth	Pb (ppm)
0" - 2"	35.66
2" - 6"	14.6
6" - 12"	24.32
12" - 24"	7.88

Depth	Pb (ppm)
0" - 2"	100.29
2" - 6"	116.06
6" - 12"	54.51
12" - 24"	<LOD

Depth	Pb (ppm)
0" - 2"	115.14
2" - 6"	78.87
6" - 12"	75.2
12" - 24"	<LOD

Depth	Pb (ppm)
0" - 2"	180.15
2" - 6"	216.9
6" - 12"	38.7
12" - 24"	74.17

Depth	Pb (ppm)
0" - 2"	138.16
2" - 6"	190.7
6" - 12"	73.31
12" - 24"	11

Depth	Pb (ppm)
0" - 2"	55.65
2" - 6"	12.29
6" - 12"	13.04
12" - 24"	57.49

Depth	Pb (ppm)
0" - 2"	163.89
2" - 6"	55.26
6" - 12"	87.28
12" - 24"	<LOD

Depth	Pb (ppm)
0" - 2"	194.99
2" - 6"	178.79
6" - 12"	46.16
12" - 24"	26.02

Depth	Pb (ppm)
0" - 2"	82.41
2" - 6"	92.71
6" - 12"	53.02
12" - 24"	17.64

Legend

- Sampling/Borehole Location
- Sampled Parcel

Depth = Inches Below Ground Surface
Pb = Lead
<LOD = Below Level of Detection
ppm = parts per million

Source: Cumberland County Department of Planning and Development NJ Office of Information Technology (NJOIT), Office of Geographic Information Systems (OGIS), 2011, and Bing Maps Aerial Imagery, 2010-2011

EPA Contract No.: EP-S5-13-01 TDD No.: S05-0010-1501-400

Former Kil-Tone Site Removal Assessment
Vineland, New Jersey

X-Ray Fluorescence Lead Results

Station Location ID: 026

TETRA TECH

Prepared For: joseph gawarzewski | Prepared By: joel peters

Coordinate System: NAD 1983 StatePlane New Jersey FIPS 2900 Feet Projection: Transverse Mercator Datum: North American 1983 Units: Foot US

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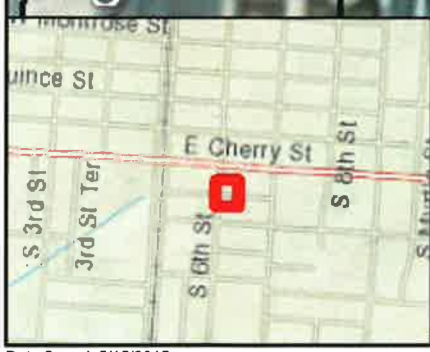

Legend

- Sampling/Borehole Location
- Sampled Parcel

Depth = Inches Below Ground Surface (BGS)
As = Arsenic
Pb = Lead
<LOD = Below Level of Detection
ppm = parts per million

Source: Cumberland County Department of Planning and Development
NJ Office of Information Technology (NJOIT), Office of Geographic Information Systems (OGIS), 2011, and Bing Maps Aerial Imagery, 2010-2011.
EPA Contract No.: EP-S5-13-01 TDD No.: S05-0010-1501-400

Former Kil-Tone Site Removal Assessment
Vineland, New Jersey

Arsenic and Lead Fixed Lab Results
Station Location ID: 027

TETRA TECH

Prepared For: joseph.gawarzewski | Prepared By: joel.peters

Coordinate System: NAD 1983 StatePlane New Jersey FIPS 2900 Feet Projection: Transverse Mercator Datum: North American 1983 Units: Foot US

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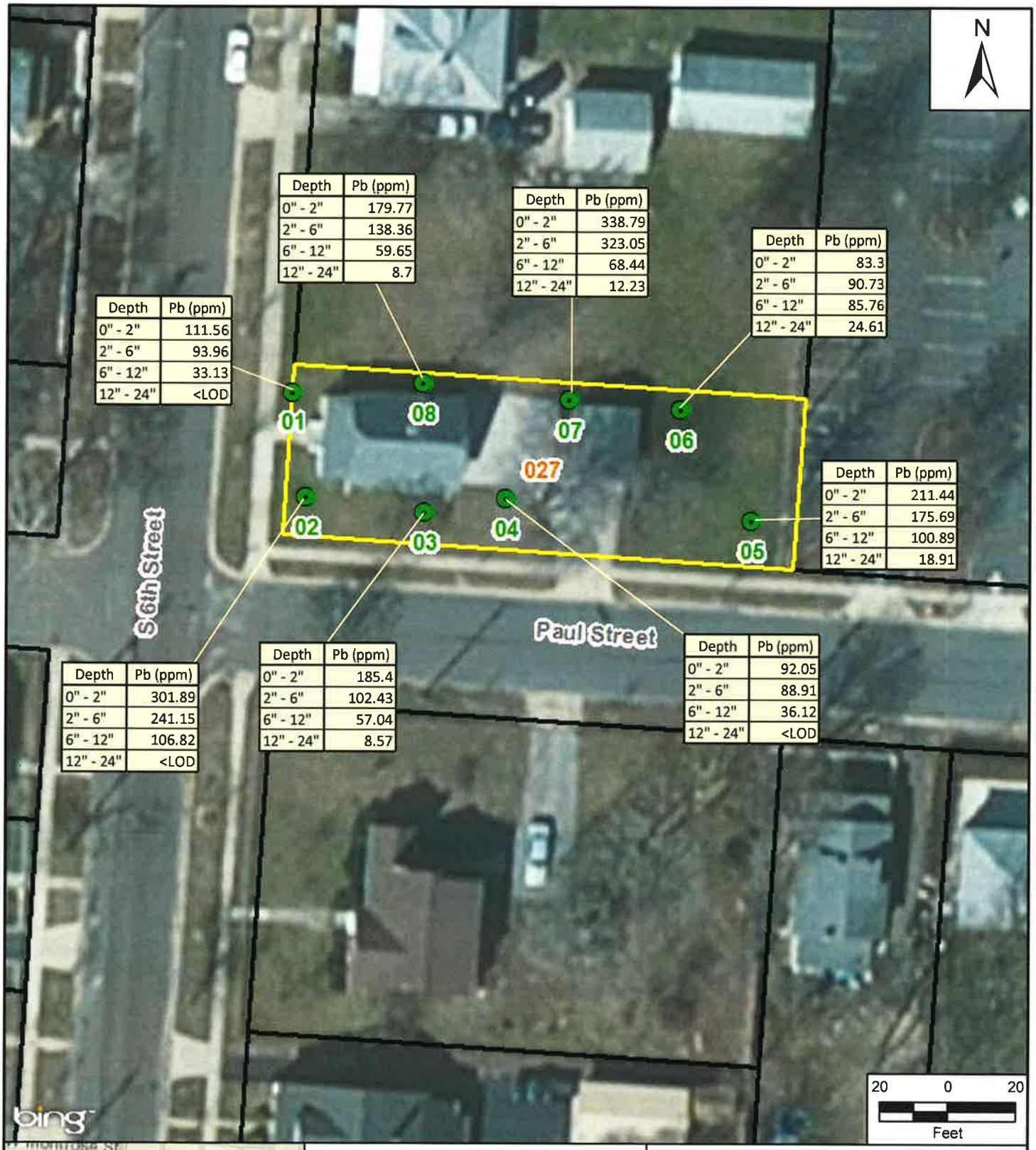


Legend

- Sampling/Borehole Location
- Sampled Parcel

Depth = Inches Below Ground Surface
Pb = Lead
<LOD = Below Level of Detection
ppm = parts per million

Source: Cumberland County Department of Planning and Development NJ Office of Information Technology (NJOIT), Office of Geographic Information Systems (OGIS), 2011, and Bing Maps Aerial Imagery, 2010-2011.
EPA Contract No.: EP-S5-13-01 TDD No.: S05-0010-1501-400

Former Kil-Tone Site Removal Assessment
Vineland, New Jersey

X-Ray Fluorescence Lead Results
Station Location ID: 027

TETRA TECH

Prepared For: joseph.gawarzewski | Prepared By: joel.peters

Coordinate System: NAD 1983 StatePlane New Jersey FIPS 2900 Feet Projection: Transverse Mercator Datum: North American 1983 Units: Foot US

File Path: S:\CADD\ll9026\0001\S05150140\mxd\XRF_LeadOnly\FIG_X_027_Vineland_715_S_6th_PB.mxd

Date Saved: 5/21/2015

Legend

- Sampling/Borehole Location
- Sampled Parcel

Depth = Inches Below Ground Surface (BGS)
As = Arsenic
Pb = Lead
<LOD = Below Level of Detection
ppm = parts per million

Source: Cumberland County Department of Planning and Development NJ Office of Information Technology (NJOIT), Office of Geographic Information Systems (OGIS), 2011, and Bing Maps Aerial Imagery, 2010-2011.

EPA Contract No.: EP-S5-13-01 TDD No.: S05-0010-1501-400

Former Kil-Tone Site Removal Assessment
Vineland, New Jersey

Arsenic and Lead Fixed Lab Results

Station Location ID: 028

TETRA TECH

Prepared For: joseph.gawarzewski | Prepared By: joel.peters

Coordinate System: NAD 1983 StatePlane New Jersey FIPS 2900 Feet Projection: Transverse Mercator Datum: North American 1983 Units: Feet US

File Path: S:\CADD\ll\9026\0001\S05150140\mxd\Fixed_PB_AS\FIG_X_028_Vineland_713_S_6th_DESA.mxd

Date Saved: 5/15/2015

Depth	Pb (ppm)
0" - 2"	199.59
2" - 6"	143.71
6" - 12"	69.88
12" - 24"	11.65

Depth	Pb (ppm)
0" - 2"	377.46
2" - 6"	87.12
6" - 12"	101.09
12" - 24"	64.4

Depth	Pb (ppm)
0" - 2"	214.79
2" - 6"	210.22
6" - 12"	174.44
12" - 24"	25.52

Depth	Pb (ppm)
0" - 2"	18.66
2" - 6"	21.02
6" - 12"	25.68
12" - 24"	11.91

Depth	Pb (ppm)
0" - 2"	123.66
2" - 6"	98.33
6" - 12"	328.25
12" - 24"	81.84

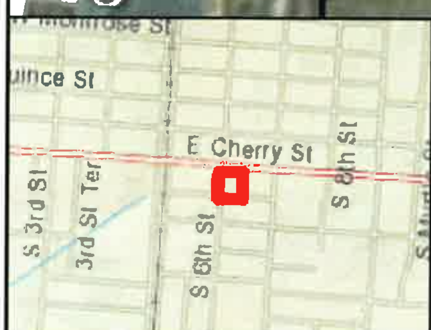
Depth	Pb (ppm)
0" - 2"	237.1
2" - 6"	257.74
6" - 12"	161.43
12" - 24"	64.38

Depth	Pb (ppm)
0" - 2"	207.71
2" - 6"	214.39
6" - 12"	104.43
12" - 24"	7.12

Depth	Pb (ppm)
0" - 2"	233.65
2" - 6"	181.16
6" - 12"	105.13
12" - 24"	24.26

Depth	Pb (ppm)
0" - 2"	151.7
2" - 6"	163.15
6" - 12"	109.99
12" - 24"	41.05

Depth	Pb (ppm)
0" - 2"	81.27
2" - 6"	82.96
6" - 12"	45.23
12" - 24"	7.88



Legend

- Sampling/Borehole Location
- Sampled Parcel

Depth = Inches Below Ground Surface
Pb = Lead
<LOD = Below Level of Detection
ppm = parts per million

Source: Cumberland County Department of Planning and Development
NJ Office of Information Technology (NJOIT), Office of Geographic Information Systems (OGIS), 2011, and Bing Maps Aerial Imagery, 2010-2011.
EPA Contract No.: EP-S5-13-01 TDD No.: S05-0010-1501-400

Former Kil-Tone Site Removal Assessment
Vineland, New Jersey

X-Ray Fluorescence Lead Results
Station Location ID: 028

TETRA TECH

Prepared For: joseph.gawarzewski | Prepared By: joel.peters

Coordinate System: NAD 1983 StatePlane New Jersey FIPS 2900 Feet Projection: Transverse Mercator Datum: North American 1983 Units: Foot US

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Date Saved: 5/21/2015

Legend

- Sampling/Borehole Location
- Sampled Parcel

Depth = Inches Below Ground Surface (BGS)
As = Arsenic
Pb = Lead
<LOD = Below Level of Detection
ppm = parts per million

Source: Cumberland County Department of Planning and Development NJ Office of Information Technology (NJOIT), Office of Geographic Information Systems (OGIS), 2011, and Bing Maps Aerial Imagery, 2010-2011.

EPA Contract No.: EP-S5-13-01 TDD No.: S05-0010-1501-400

Former Kil-Tone Site Removal Assessment
Vineland, New Jersey

Arsenic and Lead Fixed Lab Results

Station Location ID: 030

TETRA TECH

Prepared For: joseph.gawarzewski | Prepared By: joel.peters

Coordinate System: NAD 1983 StatePlane New Jersey FIPS 2900 Feet Projection: Transverse Mercator Datum: North American 1983 Units: Foot US

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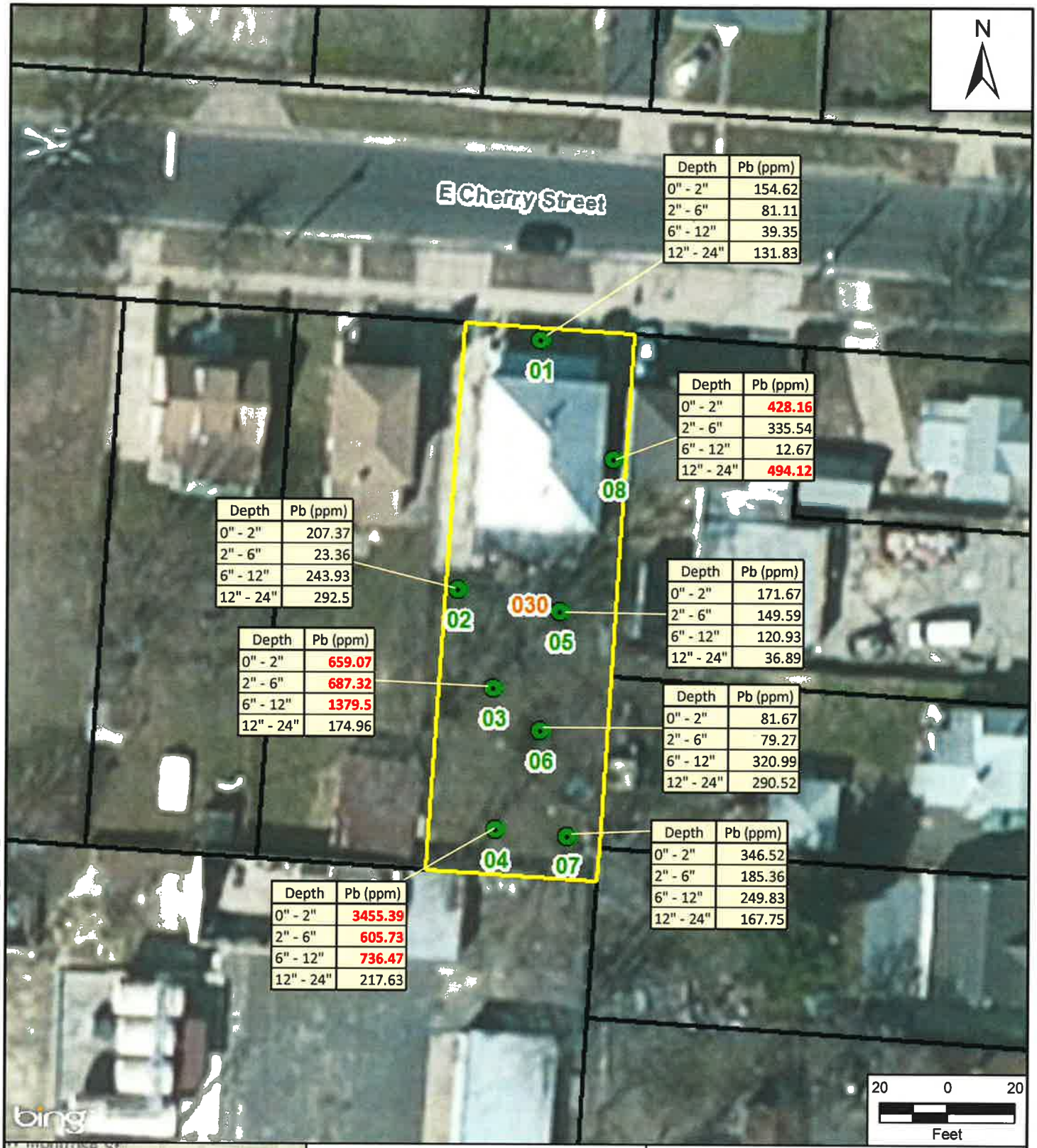
Date Saved: 5/15/2015



Depth	Pb (ppm)
0" - 2"	154.62
2" - 6"	81.11
6" - 12"	39.35
12" - 24"	131.83

Depth	Pb (ppm)
0" - 2"	428.16
2" - 6"	335.54
6" - 12"	12.67
12" - 24"	494.12

Depth	Pb (ppm)
0" - 2"	207.37
2" - 6"	23.36
6" - 12"	243.93
12" - 24"	292.5

Depth	Pb (ppm)
0" - 2"	171.67
2" - 6"	149.59
6" - 12"	120.93
12" - 24"	36.89

Depth	Pb (ppm)
0" - 2"	659.07
2" - 6"	687.32
6" - 12"	1379.5
12" - 24"	174.96

Depth	Pb (ppm)
0" - 2"	81.67
2" - 6"	79.27
6" - 12"	320.99
12" - 24"	290.52

Depth	Pb (ppm)
0" - 2"	346.52
2" - 6"	185.36
6" - 12"	249.83
12" - 24"	167.75

Depth	Pb (ppm)
0" - 2"	3455.39
2" - 6"	605.73
6" - 12"	736.47
12" - 24"	217.63

Legend

- Sampling/Borehole Location
- Sampled Parcel

Depth = Inches Below Ground Surface
Pb = Lead
<LOD = Below Level of Detection
ppm = parts per million

Source: Cumberland County Department of Planning and Development NJ Office of Information Technology (NJOIT), Office of Geographic Information Systems (OGIS), 2011, and Bing Maps Aerial Imagery, 2010-2011.

EPA Contract No.: EP-S5-13-01 TDD No.: S05-0010-1501-400

Former Kil-Tone Site Removal Assessment
Vineland, New Jersey

X-Ray Fluorescence Lead Results
Station Location ID: 030

TETRA TECH

Prepared For: joseph.gawarzewski | Prepared By: joel.peters

Coordinate System: NAD 1983 StatePlane New Jersey FIPS 2900 Feet Projection: Transverse Mercator Datum: North American 1983 Units: Foot US

File Path: S:\CADD\N9026\0001\S05150140\mxd\XRF_LeadOnly\FIG_X_030_Vineland_531_E_Cherry_PB.mxd

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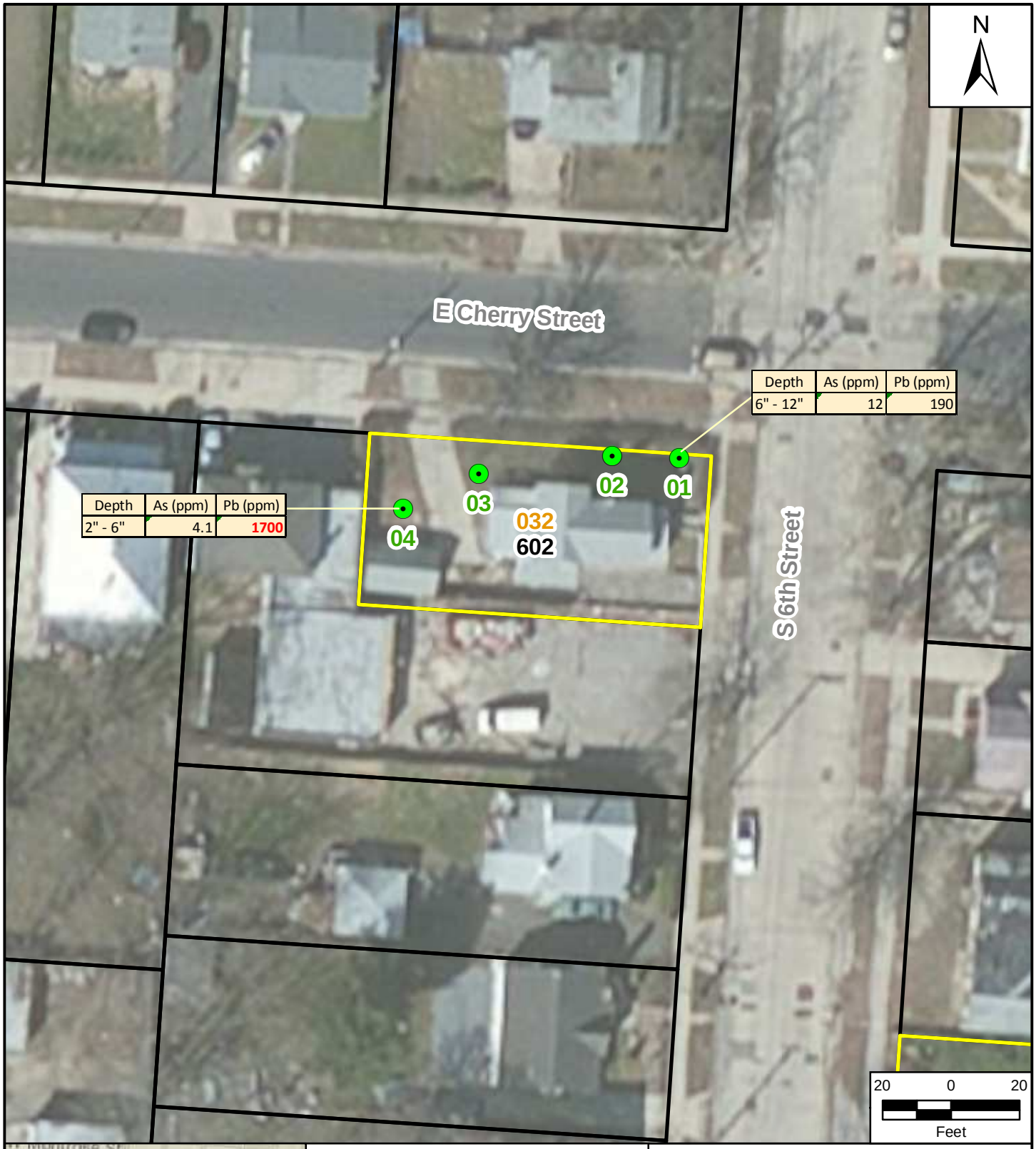

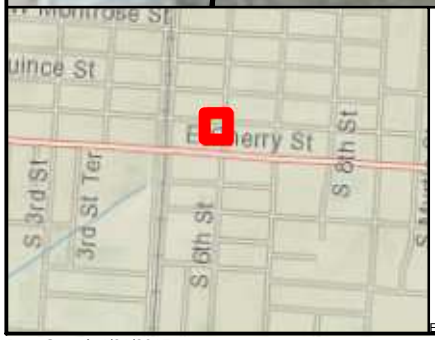

Legend

- Sampling/Borehole Location
- Sampled Parcel

Depth = Inches Below Ground Surface (BGS)
As = Arsenic
Pb = Lead
<LOD = Below Level of Detection
ppm = parts per million

Source: Cumberland County Department of Planning and Development NJ Office of Information Technology (NJOIT), Office of Geographic Information Systems (OGIS), 2011, and Bing Maps Aerial Imagery, 2010-2011.

EPA Contract No.: EP-S5-13-01 TDD No.: S05-0010-1501-400

Former Kil-Tone Site Removal Assessment
Vineland, New Jersey

Figure X
Sampling Location Map
Station Location ID: 032
602 S. 6th St.

TETRA TECH

Prepared For: joseph.gawarzewski | Prepared By: joel.peters

Coordinate System: NAD 1983 StatePlane New Jersey FIPS 2900 Feet Projection: Transverse Mercator Datum:North American 1983 Units: Foot US

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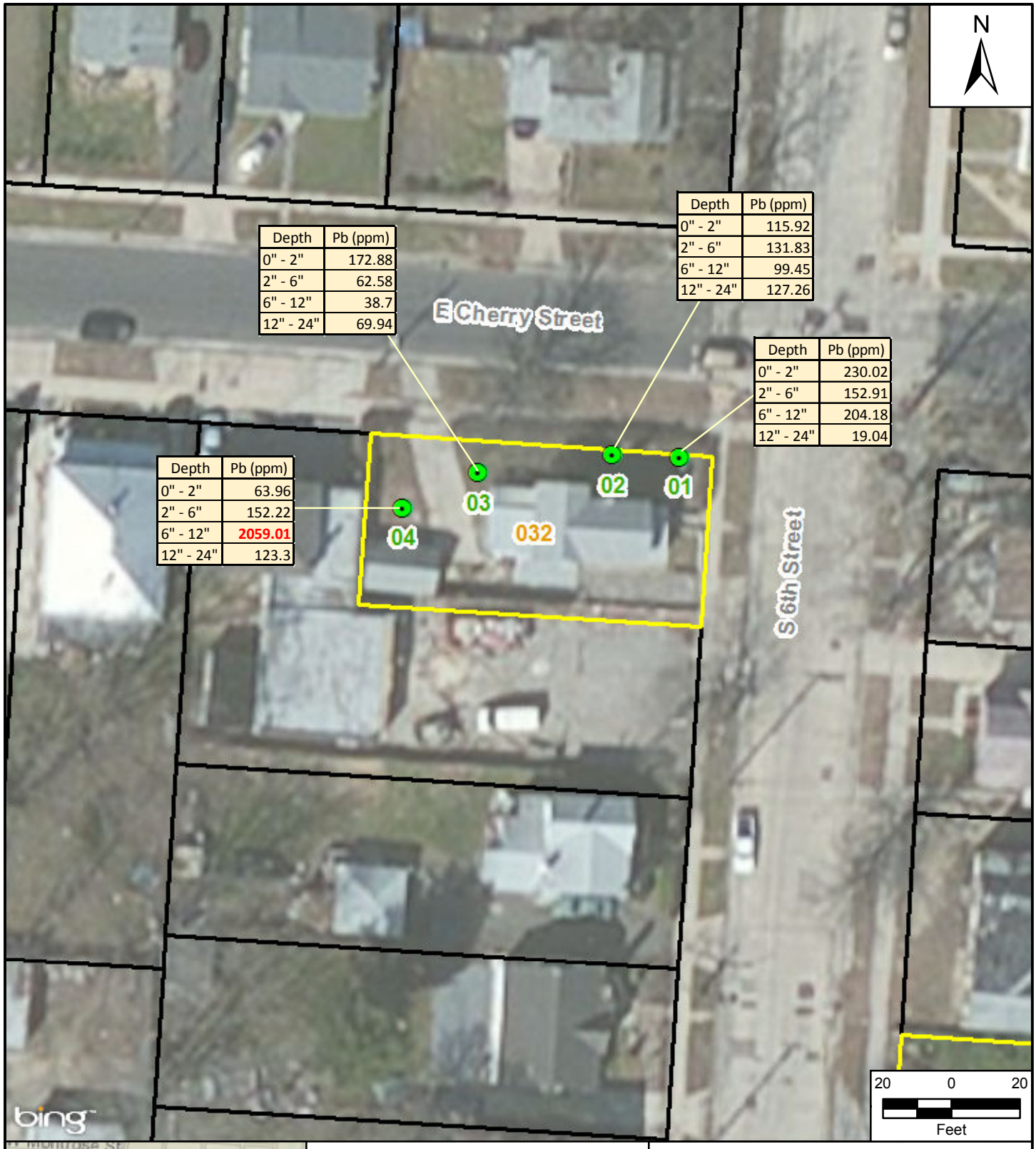
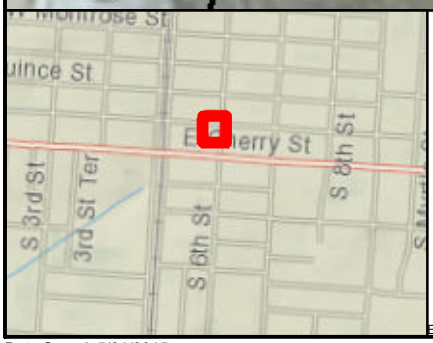


Depth	Pb (ppm)
0" - 2"	172.88
2" - 6"	62.58
6" - 12"	38.7
12" - 24"	69.94

Depth	Pb (ppm)
0" - 2"	115.92
2" - 6"	131.83
6" - 12"	99.45
12" - 24"	127.26

Depth	Pb (ppm)
0" - 2"	230.02
2" - 6"	152.91
6" - 12"	204.18
12" - 24"	19.04

Depth	Pb (ppm)
0" - 2"	63.96
2" - 6"	152.22
6" - 12"	2059.01
12" - 24"	123.3



Legend

- Sampling/Borehole Location
- Sampled Parcel

Depth = Inches Below Ground Surface
Pb = Lead
<LOD = Below Level of Detection
ppm = parts per million

Source: Cumberland County Department of Planning and Development NJ Office of Information Technology (NJOIT), Office of Geographic Information Systems (OGIS), 2011, and Bing Maps Aerial Imagery, 2010-2011.
EPA Contract No.: EP-S5-13-01 TDD No.: S05-0010-1501-400

Former Kil-Tone Site Removal Assessment
Vineland, New Jersey

X-Ray Fluorescence Lead Results
Station Location ID: 032

TETRA TECH

Prepared For: joseph.gawarzewski | Prepared By: joel.peters

File Path: S:\CADD\I\9026\0001\S051501400\mxd\XRF_LeadOnly\FIG_X_032_Vineland_602_S_6th_PB.mxd

Date Saved: 5/21/2015

Coordinate System: NAD 1983 StatePlane New Jersey FIPS 2900 Feet Projection: Transverse Mercator Datum:North American 1983 Units: Foot US

Legend

- Sampling/Borehole Location
- Sampled Parcel

Depth = Inches Below Ground Surface (BGS)
As = Arsenic
Pb = Lead
<LOD = Below Level of Detection
ppm = parts per million

Source: Cumberland County Department of Planning and Development NJ Office of Information Technology (NJOIT), Office of Geographic Information Systems (OGIS), 2011, and Bing Maps Aerial Imagery, 2010-2011.
EPA Contract No.: EP-S5-13-01 TDD No.: S05-0010-1501-400

Former Kil-Tone Site Removal Assessment
Vineland, New Jersey

Arsenic and Lead Fixed Lab Results
Station Location ID: 033

TETRA TECH

Prepared For: joseph.gawarzewski | Prepared By: joel.peters

Coordinate System: NAD 1983 StatePlane New Jersey FIPS 2900 Feet Projection: Transverse Mercator Datum: North American 1983 Units: Foot US

File Path: S:\CADD\ll9026\0001\S0515014001mxd\Fixed_PB_ASIFIG_X_033_Vineland_606_S_6th_DESA.mxd

Date Saved: 5/15/2015

Sample 01

Depth	Pb (ppm)
0" - 2"	311.78
2" - 6"	245.8
6" - 12"	201.46
12" - 24"	45.73

Sample 02

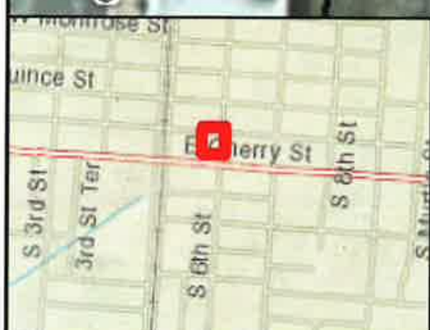
Depth	Pb (ppm)
0" - 2"	**506.66**
2" - 6"	**444.08**
6" - 12"	205.79
12" - 24"	98.49

Sample 03

Depth	Pb (ppm)
0" - 2"	130.35
2" - 6"	115.35
6" - 12"	86.53
12" - 24"	(Refusal)

Sample 04

Depth	Pb (ppm)
0" - 2"	**555.91**
2" - 6"	261.57
6" - 12"	173.55
12" - 24"	264.99



Legend

- Sampling/Borehole Location
- Sampled Parcel

Depth = Inches Below Ground Surface
Pb = Lead
<LOD = Below Level of Detection
ppm = parts per million

Source: Cumberland County Department of Planning and Development
NJ Office of Information Technology (NJOIT), Office of Geographic Information Systems (OGIS), 2011, and Bing Maps Aerial Imagery, 2010-2011.
EPA Contract No.: EP-S5-13-01 TDD No.: S05-0010-1501-400

Former Kil-Tone Site Removal Assessment
Vineland, New Jersey

X-Ray Fluorescence Lead Results
Station Location ID: 033

TETRA TECH

Prepared For: joseph.gawarzewski | Prepared By: joel.peters

File Path: S:\CADD\9026\0001S051501400\mxd\XRF_LeadOnly\FIG_X_033_Vineland_606_S_6th_PB.mxd

Date Saved: 5/21/2015

Coordinate System: NAD 1983 StatePlane New Jersey FIPS 2900 Feet Projection: Transverse Mercator Datum: North American 1983 Units: Foot US

Legend

- Sampling/Borehole Location
- Sampled Parcel

Depth = Inches Below Ground Surface (BGS)
As = Arsenic
Pb = Lead
<LOD = Below Level of Detection
ppm = parts per million

Source: Cumberland County Department of Planning and Development NJ Office of Information Technology (NJOIT), Office of Geographic Information Systems (OGIS), 2011, and Bing Maps Aerial Imagery, 2010-2011.

EPA Contract No.: EP-S5-13-01 TDD No.: S05-0010-1501-400

Former Kil-Tone Site Removal Assessment
Vineland, New Jersey

Arsenic and Lead Fixed Lab Results

Station Location ID: 034

TETRA TECH

Prepared For: joseph.gawarzewski | Prepared By: joel.peters

Coordinate System: NAD 1983 StatePlane New Jersey FIPS 2900 Feet Projection: Transverse Mercator Datum:North American 1983 Units: Foot US

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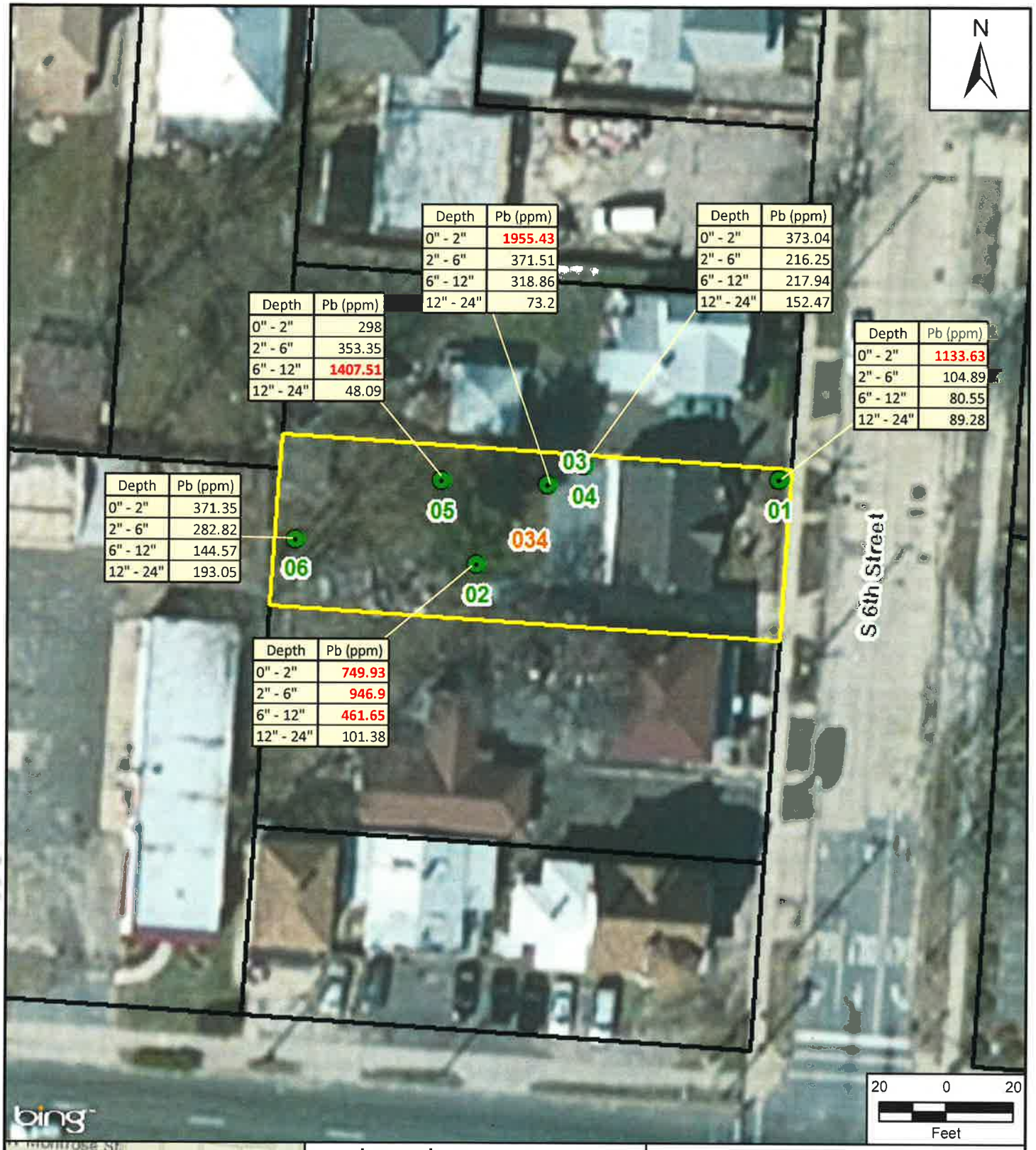

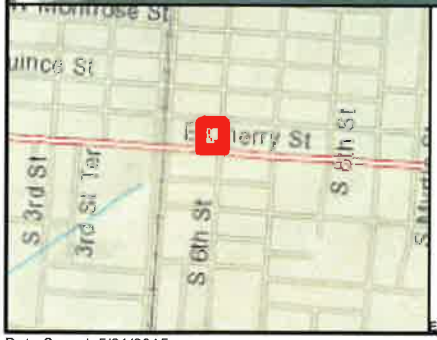

Legend

- Sampling/Borehole Location
- Sampled Parcel

Depth = Inches Below Ground Surface
Pb = Lead
<LOD = Below Level of Detection
ppm = parts per million

Source: Cumberland County Department of Planning and Development NJ Office of Information Technology (NJOIT), Office of Geographic Information Systems (OGIS), 2011, and Bing Maps Aerial Imagery, 2010-2011.

EPA Contract No.: EP-S5-13-01 TDD No.: S05-0010-1501-400

Former Kil-Tone Site Removal Assessment
Vineland, New Jersey

X-Ray Fluorescence Lead Results

Station Location ID: 034

TETRA TECH

Prepared For: joseph.gawarzewski | Prepared By: joel.peters

Coordinate System: NAD 1983 StatePlane New Jersey FIPS 2900 Feet Projection: Transverse Mercator Datum: North American 1983 Units: Foot US

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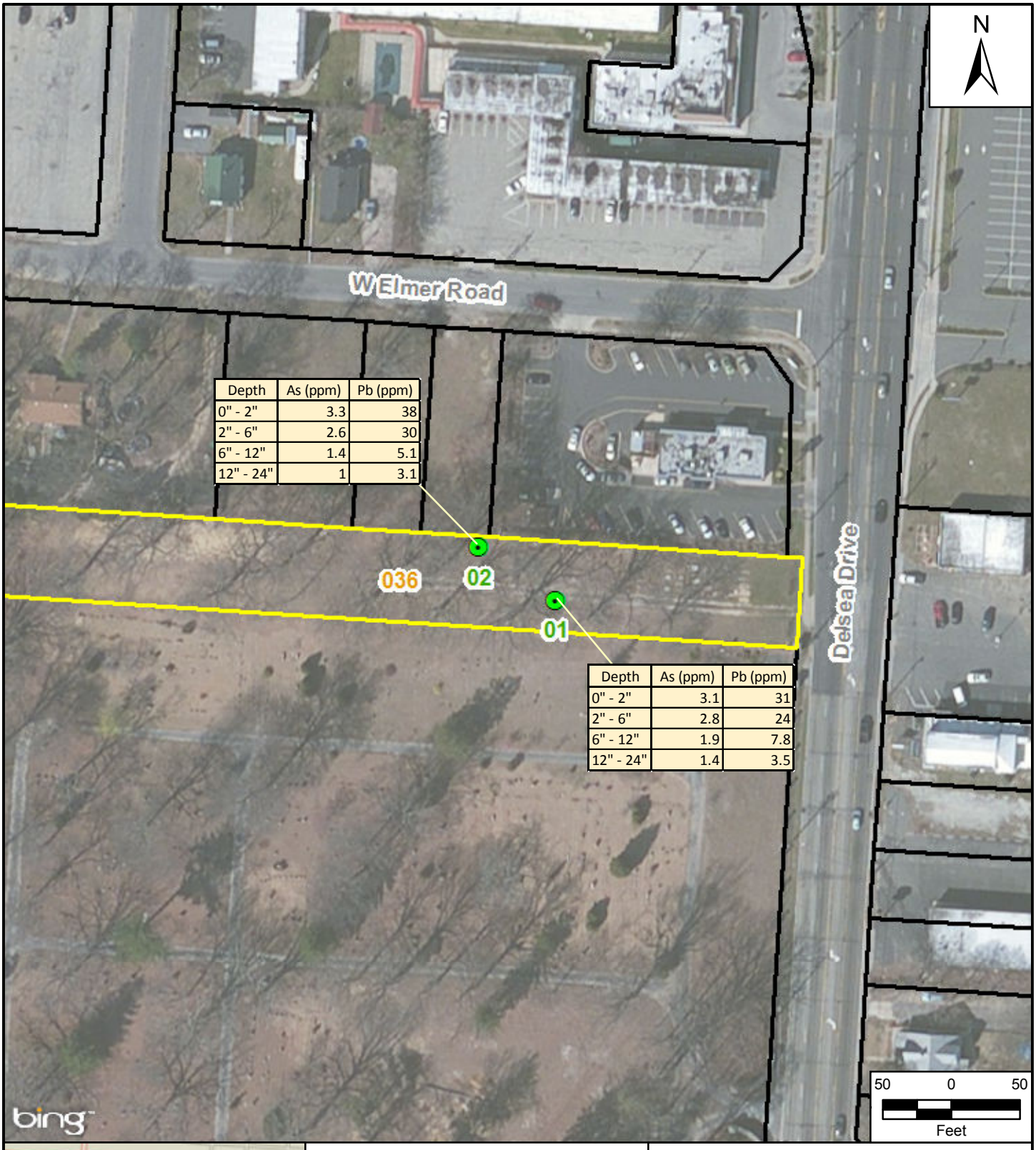
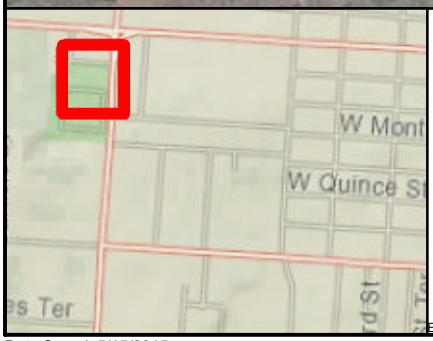


Depth	As (ppm)	Pb (ppm)
0" - 2"	3.3	38
2" - 6"	2.6	30
6" - 12"	1.4	5.1
12" - 24"	1	3.1

Depth	As (ppm)	Pb (ppm)
0" - 2"	3.1	31
2" - 6"	2.8	24
6" - 12"	1.9	7.8
12" - 24"	1.4	3.5



Legend

Sampling/Borehole Location

Sampled Parcel

Depth = Inches Below Ground Surface (BGS)
As = Arsenic
Pb = Lead
<LOD = Below Level of Detection
ppm = parts per million

Source: Cumberland County Department of Planning and Development NJ Office of Information Technology (NJOIT), Office of Geographic Information Systems (OGIS), 2011, and Bing Maps Aerial Imagery, 2010-2011.
EPA Contract No.: EP-S5-13-01 TDD No.: S05-0010-1501-400

Former Kil-Tone Site Removal Assessment
Vineland, New Jersey

Arsenic and Lead Fixed Lab Results
Station Location ID: 036

TETRA TECH

Prepared For: joseph.gawarzewski | Prepared By: joel.peters

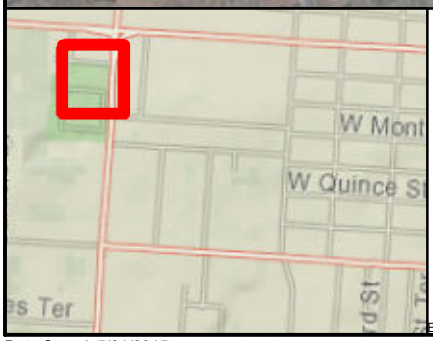
File Path: S:\CADD\I\9026\0001\S051501400\mxd\Fixed_PB_AS\FIG_X_036_Vineland_Cemetery_DESA.mxd

Date Saved: 5/15/2015

Coordinate System: NAD 1983 StatePlane New Jersey FIPS 2900 Feet Projection: Transverse Mercator Datum:North American 1983 Units: Foot US

Depth	Pb (ppm)
0" - 2"	50.98
2" - 6"	33.61
6" - 12"	< LOD
12" - 24"	< LOD

Depth	Pb (ppm)
0" - 2"	21.57
2" - 6"	41.89
6" - 12"	< LOD
12" - 24"	< LOD



Legend

- Sampling/Borehole Location
- Sampled Parcel

Depth = Inches Below Ground Surface
Pb = Lead
<LOD = Below Level of Detection
ppm = parts per million

Source: Cumberland County Department of Planning and Development NJ Office of Information Technology (NJOIT), Office of Geographic Information Systems (OGIS), 2011, and Bing Maps Aerial Imagery, 2010-2011.
EPA Contract No.: EP-S5-13-01 TDD No.: S05-0010-1501-400

Former Kil-Tone Site Removal Assessment
Vineland, New Jersey

X-Ray Fluorescence Lead Results
Station Location ID: 036

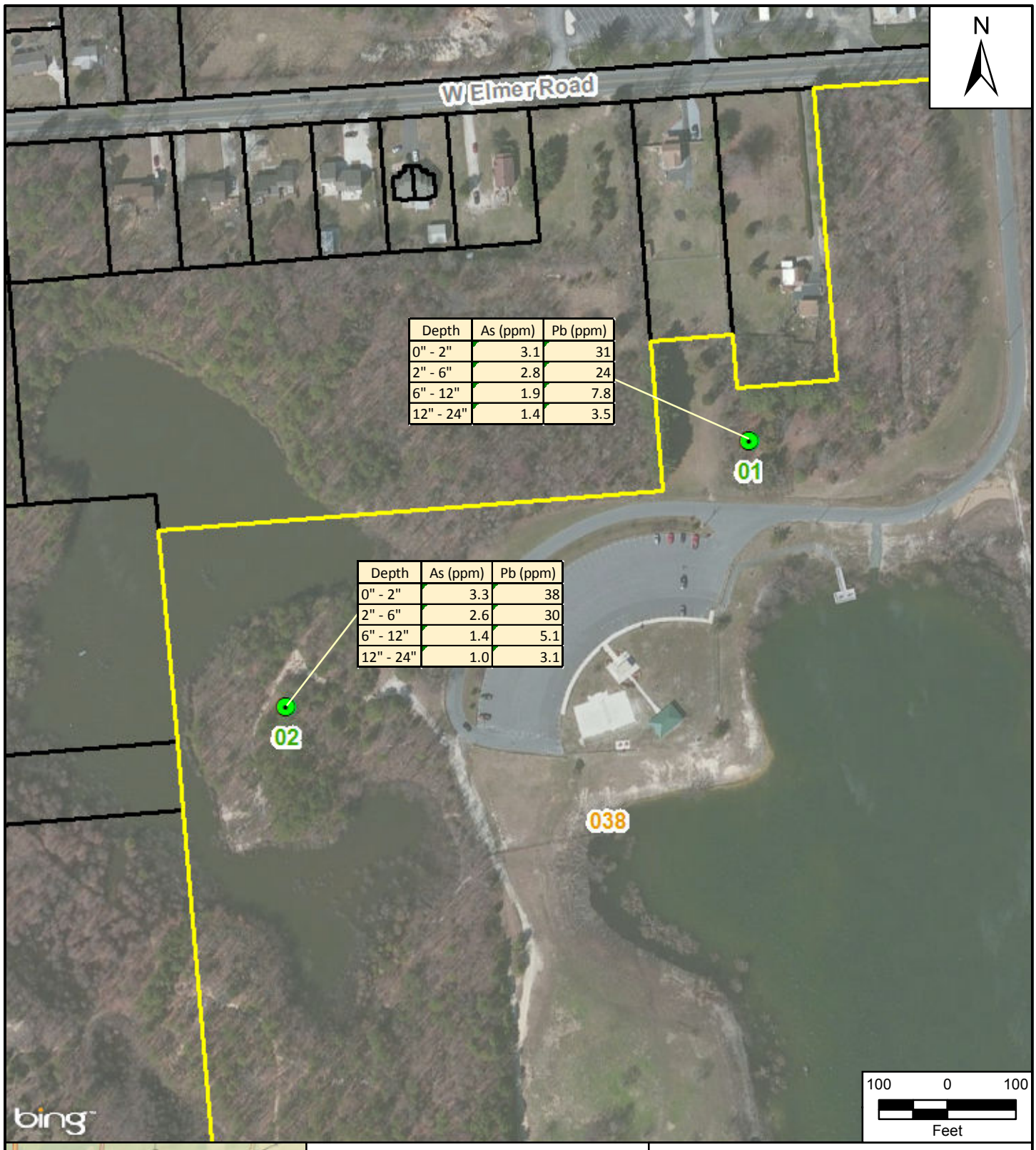
TETRA TECH

Prepared For: joseph.gawarzewski | Prepared By: joel.peters

File Path: S:\CADD\I\9026\0001\S051501400\mxd\XRF_LeadOnly\FIG_X_036_Vineland_Cemetery_PB.mxd

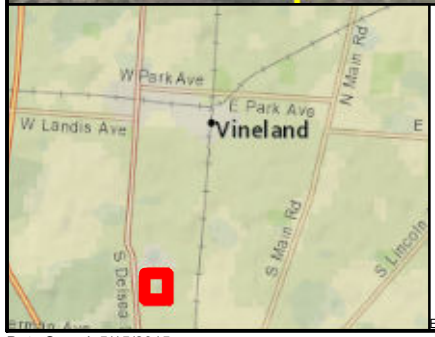
Date Saved: 5/21/2015

Coordinate System: NAD 1983 StatePlane New Jersey FIPS 2900 Feet Projection: Transverse Mercator Datum:North American 1983 Units: Foot US



Depth	As (ppm)	Pb (ppm)
0" - 2"	3.1	31
2" - 6"	2.8	24
6" - 12"	1.9	7.8
12" - 24"	1.4	3.5

Depth	As (ppm)	Pb (ppm)
0" - 2"	3.3	38
2" - 6"	2.6	30
6" - 12"	1.4	5.1
12" - 24"	1.0	3.1



Legend

Sampling/Borehole Location

Sampled Parcel

Depth = Inches Below Ground Surface (BGS)
As = Arsenic
Pb = Lead
<LOD = Below Level of Detection
ppm = parts per million

Source: Cumberland County Department of Planning and Development
NJ Office of Information Technology (NJOIT), Office of Geographic Information Systems (OGIS), 2011, and Bing Maps Aerial Imagery, 2010-2011.
EPA Contract No.: EP-S5-13-01 TDD No.: S05-0010-1501-400

Former Kil-Tone Site Removal Assessment
Vineland, New Jersey

Arsenic and Lead Fixed Lab Results
Station Location ID: 038

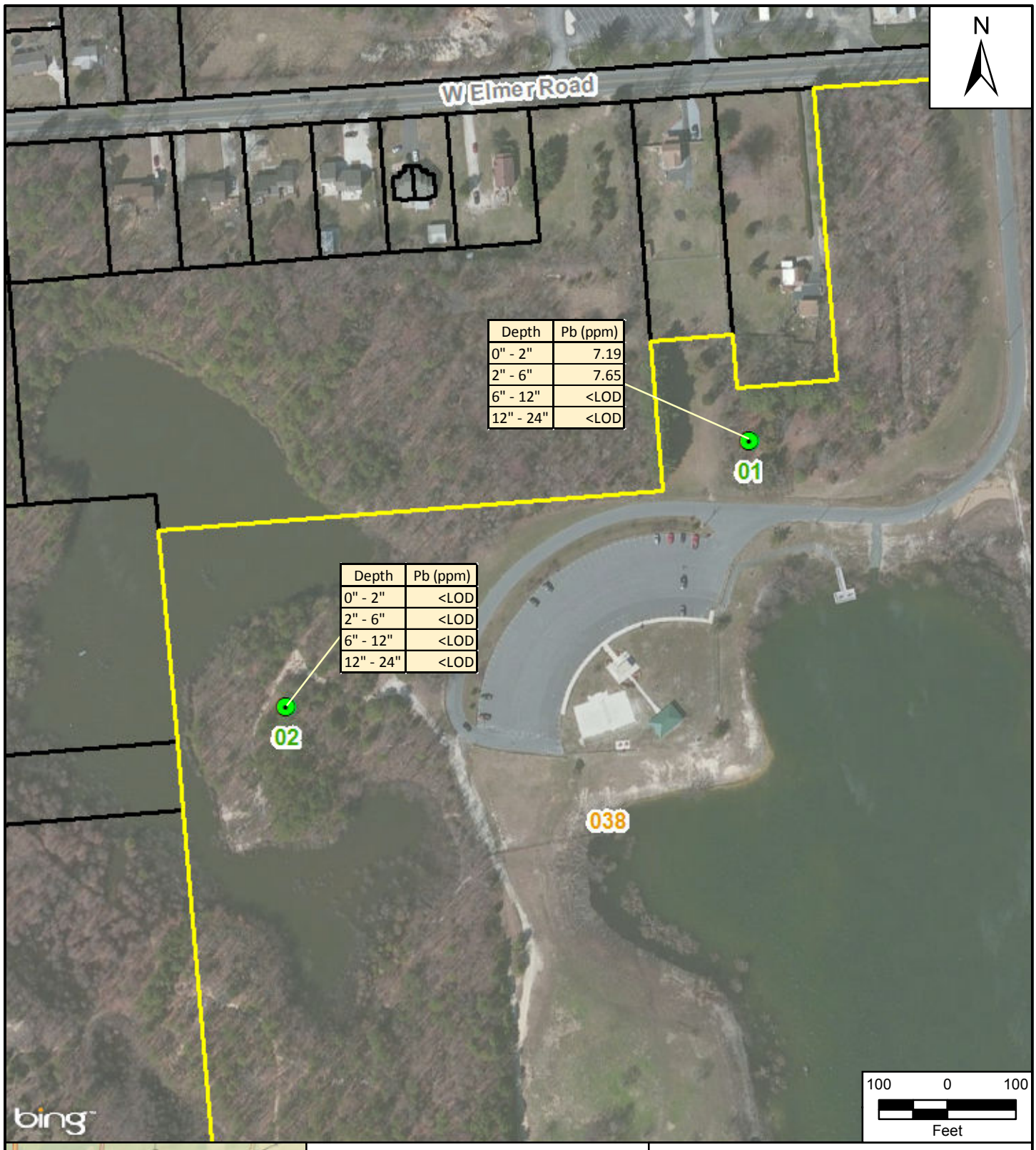
TETRA TECH

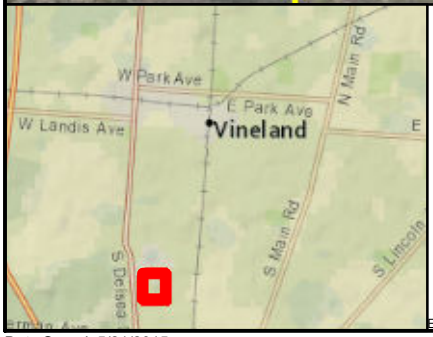
Prepared For: joseph.gawarzewski | Prepared By: joel.peters

File Path: S:\CADD\I\9026\0001\S05150140\mxd\Fixed_PB_AS\FIG_X_038_Vineland_Park_South_DESA.mxd

Date Saved: 5/15/2015

Coordinate System: NAD 1983 StatePlane New Jersey FIPS 2900 Feet Projection: Transverse Mercator Datum:North American 1983 Units: Foot US





Legend

- Sampling/Borehole Location
- Sampled Parcel

Depth = Inches Below Ground Surface
Pb = Lead
<LOD = Below Level of Detection
ppm = parts per million

Source: Cumberland County Department of Planning and Development NJ Office of Information Technology (NJOIT), Office of Geographic Information Systems (OGIS), 2011, and Bing Maps Aerial Imagery, 2010-2011.
EPA Contract No.: EP-S5-13-01 TDD No.: S05-0010-1501-400

Former Kil-Tone Site Removal Assessment
Vineland, New Jersey

X-Ray Fluorescence Lead Results
Station Location ID: 038

TETRA TECH

Prepared For: joseph.gawarzewski | Prepared By: joel.peters

File Path: S:\CADD\I\9026\0001S051501400\mxd\XRF_LeadOnly\FIG_X_038_Vineland_Park_South_PB.mxd

Date Saved: 5/21/2015

Coordinate System: NAD 1983 StatePlane New Jersey FIPS 2900 Feet Projection: Transverse Mercator Datum:North American 1983 Units: Foot US

ATTACHMENT C
Sample Results Tables

SUMMARY OF ARSENIC AND LEAD RESULTS DETECTED IN SOIL SAMPLES BY FIXED LAB ANALYSIS
FORMER KIL-TONE SITE
VINELAND, NJ
Station 001

Sample Number :	FKT-001-01-A	FKT-001-01-B	FKT-001-03-A	FKT-001-03-B	FKT-001-04-A	FKT-001-04-B	FKT-001-04-C	FKT-001-05-A	FKT-001-05-B	FKT-001-05-C	FKT-001-06-A	FKT-001-06-B	FKT-001-06-C	FKT-001-07-A	FKT-001-07-B	FKT-001-07-C	FKT-001-08-C
ANALYTE	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result
ARSENIC	37.4	39	30	47	28	43	52	41	49	72	56	62	60	60	81	71	62
LEAD	94.3	89	500	360	360	1100	170	140	130	58	150	150	88	110	100	64	74

All results are reported in parts per million (ppm)

SUMMARY OF ARSENIC AND LEAD RESULTS DETECTED IN SOIL SAMPLES BY FIXED LAB ANALYSIS
FORMER KIL-TONE SITE
VINELAND, NJ
Station 002

Sample Number :	FKT-002-03-C	FKT-002-04-B	FKT-002-04-C	FKT-002-04-D	FKT-002-05-A	FKT-002-05-B	FKT-002-05-C	FKT-002-06-B	FKT-002-08-B
ANALYTE	Result	Result	Result	Result	Result	Result	Result	Result	Result
ARSENIC	31	28	57	61	29	43	41	35	23
LEAD	37	270	220	160	64	82	69	210	64

All results are reported in parts per million (ppm)

SUMMARY OF ARSENIC AND LEAD RESULTS DETECTED IN SOIL SAMPLES BY FIXED LAB ANALYSIS
FORMER KIL-TONE SITE
VINELAND, NJ
Station 003

Sample Number	FKT-003-01-D	FKT-003-02-A	FKT-003-02-C	FKT-003-03-G
ANALYTE	Result	Result	Result	Result
ARSENIC	37	16	17	24
LEAD	31	210	130	100

All results are reported in parts per million (ppm)

SUMMARY OF ARSENIC AND LEAD RESULTS DETECTED IN SOIL SAMPLES BY FIXED LAB ANALYSIS
FORMER KIL-TONE SITE
VINELAND, NJ
Station 004

Sample Number :	FKT-004-01-C	FKT-004-01-D	FKT-004-02-C	FKT-004-02-D	FKT-004-05-A	FKT-004-05-B	FKT-004-05-C	FKT-004-05-D	FKT-004-05-F	FKT-004-05-G	FKT-004-05-H
ANALYTE	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result
ARSENIC	31	44	29	39	40.1	56	58	71.6	55	64	48
LEAD	140	130	250	260	191	200	130	464	200	140	130

All results are reported in parts per million (ppm)

SUMMARY OF ARSENIC AND LEAD RESULTS DETECTED IN SOIL SAMPLES BY FIXED LAB ANALYSIS
FORMER KIL-TONE SITE
VINELAND, NJ
Station 005

Sample Number :	FKT-005-01-C	FKT-005-02-B	FKT-005-02-C	FKT-005-04-C	FKT-005-06-A	FKT-005-06-B	FKT-005-06-C	FKT-005-07-A	FKT-005-07-B	FKT-005-07-C
ANALYTE	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result
ARSENIC	62	29	33	43	59	53.4	100	50	83	59.4
LEAD	230	210	180	190	1300	584	460	550	910	364

All results are reported in parts per million (ppm)

SUMMARY OF ARSENIC AND LEAD RESULTS DETECTED IN SOIL SAMPLES BY FIXED LAB ANALYSIS
FORMER KIL-TONE SITE
VINELAND, NJ
Station 006

Sample Number :	FKT-006-01-A	FKT-006-01-B	FKT-006-01-C	FKT-006-02-A	FKT-006-02-B	FKT-006-02-C	FKT-006-02-D	FKT-006-02-E	FKT-006-03-A	FKT-006-03-B	FKT-006-03-C	FKT-006-03-D	FKT-006-04-A	FKT-006-04-B	FKT-006-04-C	FKT-006-04-D
ANALYTE	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result
ARSENIC	27	63.4	65.9	150	170	157	60	150	150	66.7	300	74	35	33.5	170	73.2
LEAD	350	350	401	1400	540	366	93	1200	1300	454	870	120	320	207	560	195

All results reported in parts per million (ppm)

SUMMARY OF ARSENIC AND LEAD RESULTS DETECTED IN SOIL SAMPLES BY FIXED LAB ANALYSIS
FORMER KIL-TONE SITE
VINELAND, NJ
Station 007

Sample Number :	FKT-007-01-B	FKT-007-02-A	FKT-007-02-B	FKT-007-02-C	FKT-007-02-D	FKT-007-03-A	FKT-007-03-B	FKT-007-03-C	FKT-007-03-D	FKT-007-03-E	FKT-007-03-F	FKT-007-03-G	FKT-007-03-H	FKT-007-04-C	FKT-007-04-D
ANALYTE	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result
ARSENIC	14	130	590	180	344	200	980	600	443	240	1000	590	480	140	40
LEAD	290	960	1300	340	325	600	1280	720	755	640	1100	690	800	2000	140

All results are reported in parts per million (ppm)

SUMMARY OF ARSENIC AND LEAD RESULTS DETECTED IN SOIL SAMPLES BY FIXED LAB ANALYSIS
FORMER KIL-TONE SITE
VINELAND, NJ
Station 008

Sample Number :	FKT-008-02-A	FKT-008-02-B	FKT-008-02-C	FKT-008-05-B	FKT-008-06-B	FKT-008-06-C	FKT-008-07-A	FKT-008-07-B	FKT-008-07-C	FKT-008-08-A	FKT-008-08-B	FKT-008-08-C	FKT-008-08-D
ANALYTE	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result
ARSENIC	21.7	36	29	21	38.1	19	32.1	63	69	24	31	27.7	22.7
LEAD	348	320	140	170	760	350	599	890	1300	660	860	731	567

All results are reported in parts per million (ppm)

SUMMARY OF ARSENIC AND LEAD RESULTS DETECTED IN SOIL SAMPLES BY FIXED LAB ANALYSIS
FORMER KIL-TONE SITE
VINELAND, NJ
Station 009

Sample Number :	FKT-009-01-C	FKT-009-06-D
ANALYTE	Result	Result
ARSENIC	20	28
LEAD	380	250

All results are reported in parts per million (ppm)

SUMMARY OF ARSENIC AND LEAD RESULTS DETECTED IN SOIL SAMPLES BY FIXED LAB ANALYSIS
FORMER KIL-TONE SITE
VINELAND, NJ
Station 010

Sample Number :	FKT-010-01-A	FKT-010-01-B	FKT-010-01-C	FKT-010-02-A	FKT-010-02-B	FKT-010-02-C
ANALYTE	Result	Result	Result	Result	Result	Result
ARSENIC	12.5	23	17	17	16.2	44
LEAD	778	1800	2500	670	1310	2000

All results are reported in parts per million (ppm)

SUMMARY OF ARSENIC AND LEAD RESULTS DETECTED IN SOIL SAMPLES BY FIXED LAB ANALYSIS
FORMER KIL-TONE SITE
VINELAND, NJ
Station 012

Sample Number :	FKT-012-02-A	FKT-012-02-D	FKT-012-03-B	FKT-012-03-D
ANALYTE	Result	Result	Result	Result
ARSENIC	9.8	26	8.3	27
LEAD	330	140	750	340

All results are reported in parts per million (ppm)

SUMMARY OF ARSENIC AND LEAD RESULTS DETECTED IN SOIL SAMPLES BY FIXED LAB ANALYSIS
FORMER KIL-TONE SITE
VINELAND, NJ
Station 013

Sample Number :	FKT-013-03-D	FKT-013-06-D	FKT-013-08-B	FKT-013-08-D
ANALYTE	Result	Result	Result	Result
ARSENIC	29	8.5	11	22
LEAD	920	440	470	400

All results are reported in parts per million (ppm)

SUMMARY OF ARSENIC AND LEAD RESULTS DETECTED IN SOIL SAMPLES BY FIXED LAB ANALYSIS
FORMER KIL-TONE SITE
VINELAND, NJ
Station 014

Sample Number :	FKT-014-02-D	FKT-014-08-B	FKT-014-08-C
ANALYTE	Result	Result	Result
ARSENIC	18	11	9.4
LEAD	140	220	250

All results are reported in parts per million (ppm)

SUMMARY OF ARSENIC AND LEAD RESULTS DETECTED IN SOIL SAMPLES BY FIXED LAB ANALYSIS
FORMER KIL-TONE SITE
VINELAND, NJ
Station 015

Sample Number :	FKT-015-01-B	FKT-015-02-C	FKT-015-02-D	FKT-015-03-D	FKT-015-05-B	FKT-015-05-C
ANALYTE	Result	Result	Result	Result	Result	Result
ARSENIC	12	20	9.7	17	10	32
LEAD	330	250	120	680	220	440

All results are reported in parts per million (ppm)

SUMMARY OF ARSENIC AND LEAD RESULTS DETECTED IN SOIL SAMPLES BY FIXED LAB ANALYSIS
FORMER KIL-TONE SITE
VINELAND, NJ
Station 016

Sample Number :	FKT-016-05-D	FKT-016-06-D	FKT-016-09-C
ANALYTE	Result	Result	Result
ARSENIC	41	110	22
LEAD	110	270	340

All results are reported in parts per million (ppm)

SUMMARY OF ARSENIC AND LEAD RESULTS DETECTED IN SOIL SAMPLES BY FIXED LAB ANALYSIS
FORMER KIL-TONE SITE
VINELAND, NJ
Station 018

Sample Number :	FKT-018-01-A	FKT-018-01-B	FKT-018-01-C	FKT-018-01-D	FKT-018-01-G	FKT-018-02-A	FKT-018-02-B	FKT-018-02-C	FKT-018-02-D
ANALYTE	Result	Result	Result	Result	Result	Result	Result	Result	Result
ARSENIC	6.4	5.7	3.1	3.3	2.1	4.2	3.2	2.9	1.5
LEAD	57	47	8.3	8.7	7.0	39	26	19	5.1

All results are reported in parts per million (ppm)

SUMMARY OF ARSENIC AND LEAD RESULTS DETECTED IN SOIL SAMPLES BY FIXED LAB ANALYSIS
FORMER KIL-TONE SITE
VINELAND, NJ
Station 020

Sample Number :	FKT-020-01-A	FKT-020-01-B	FKT-020-02-B	FKT-020-02-D	FKT-020-03-B	FKT-020-03-C	FKT-020-04-B	FKT-020-04-C	FKT-020-06-C
ANALYTE	Result	Result	Result	Result	Result	Result	Result	Result	Result
ARSENIC	50	43.6	21	27	35	46	67	63	36
LEAD	500	413	310	150	180	110	170	94	94

All results are reported in parts per million (ppm)

SUMMARY OF ARSENIC AND LEAD RESULTS DETECTED IN SOIL SAMPLES BY FIXED LAB ANALYSIS
FORMER KIL-TONE SITE
VINELAND, NJ
Station 021

Sample Number :	FKT-021-01-C	FKT-021-01-D	FKT-021-02-A	FKT-021-02-B	FKT-021-02-C	FKT-021-02-D	FKT-021-04-C	FKT-021-04-D	FKT-021-05-A	FKT-021-05-B	FKT-021-05-C	FKT-021-05-D	FKT-021-07-C	FKT-021-07-D	FKT-021-08-A	FKT-021-08-B	FKT-021-08-C
ANALYTE	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result
ARSENIC	66.3	49.8	44	78	53.4	68	52	41	52	100	36.7	42.5	66	53	61	47	56.8
LEAD	43.8	48.2	120	92	19	51	140	58	110	170	80.6	30.3	440	150	340	440	321

All results are reported in parts per million (ppm)

SUMMARY OF ARSENIC AND LEAD RESULTS DETECTED IN SOIL SAMPLES BY FIXED LAB ANALYSIS
FORMER KIL-TONE SITE
VINELAND, NJ
Station 022

Sample Number :	FKT-022-02-A	FKT-022-02-C	FKT-022-03-A	FKT-022-03-B	FKT-022-03-C	FKT-022-04-B	FKT-022-04-C	FKT-022-04-D	FKT-022-05-B	FKT-022-06-B
ANALYTE	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result
ARSENIC	18	35	23.1	100	48	49	110	120	15.9	31.9
LEAD	640	170	441	1300	180	290	230	46	290	445

All results are reported in parts per million (ppm)

SUMMARY OF ARSENIC AND LEAD RESULTS DETECTED IN SOIL SAMPLES BY FIXED LAB ANALYSIS
FORMER KIL-TONE SITE
VINELAND, NJ
Station 023

Sample Number :	FKT-023-02-C	FKT-023-03-D	FKT-023-05-C	FKT-023-05-D
ANALYTE	Result	Result	Result	Result
ARSENIC	65	26	25	24
LEAD	130	99	310	190

All results are reported in parts per million (ppm)

SUMMARY OF ARSENIC AND LEAD RESULTS DETECTED IN SOIL SAMPLES BY FIXED LAB ANALYSIS
FORMER KIL-TONE SITE
VINELAND, NJ
Station 025

Sample Number :	FKT-025-02-C	FKT-025-03-A	FKT-025-07-D
ANALYTE	Result	Result	Result
ARSENIC	35	18	18.9
LEAD	50	100	62.5

All results are reported in parts per million (ppm)

SUMMARY OF ARSENIC AND LEAD RESULTS DETECTED IN SOIL SAMPLES BY FIXED LAB ANALYSIS
FORMER KIL-TONE SITE
VINELAND, NJ
Station 026

Sample Number :	FKT-026-01-A	FKT-026-01-B	FKT-026-01-E	FKT-026-01-F	FKT-026-02-A	FKT-026-02-B	FKT-026-02-C	FKT-026-06-A	FKT-026-06-C	FKT-026-08-C	FKT-026-09-B	FKT-026-09-C
ANALYTE	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result
ARSENIC	50	40	45.7	40.8	45	75	38	17	47	31	29	44
LEAD	94	87	86.7	69.3	110	130	64	85	69	64	82	45

All results are reported in parts per million (ppm)

SUMMARY OF ARSENIC AND LEAD RESULTS DETECTED IN SOIL SAMPLES BY FIXED LAB ANALYSIS
FORMER KIL-TONE SITE
VINELAND, NJ
Station 027

Sample Number :	FKT-027-01-A	FKT-027-01-B	FKT-027-02-B	FKT-027-02-C	FKT-027-02-E	FKT-027-02-F	FKT-027-03-B	FKT-027-03-C	FKT-027-05-A	FKT-027-05-B	FKT-027-08-B
ANALYTE	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result
ARSENIC	23	21.8	30	35	22	24	24	34	23	25	16
LEAD	110	114	190	75	210	200	88	45	160	170	100

All results are reported in parts per million (ppm)

SUMMARY OF ARSENIC AND LEAD RESULTS DETECTED IN SOIL SAMPLES BY FIXED LAB ANALYSIS
FORMER KIL-TONE SITE
VINELAND, NJ
Station 028

Sample Number :	FKT-028-02-A	FKT-028-05-A	FKT-028-05-B
ANALYTE	Result	Result	Result
ARSENIC	10	24	23
LEAD	290	210	190

All results are reported in parts per million (ppm)

SUMMARY OF ARSENIC AND LEAD RESULTS DETECTED IN SOIL SAMPLES BY FIXED LAB ANALYSIS
FORMER KIL-TONE SITE
VINELAND, NJ
Station 030

Sample Number :	FKT-030-02-D	FKT-030-03-A	FKT-030-03-C	FKT-030-03-D	FKT-030-04-A	FKT-030-04-C	FKT-030-06-C
ANALYTE	Result	Result	Result	Result	Result	Result	Result
ARSENIC	5.7	10.8	22	23	6.5	11	2.7
LEAD	100	477	720	210	1800	700	44

All results are reported in parts per million (ppm)

SUMMARY OF ARSENIC AND LEAD RESULTS DETECTED IN SOIL SAMPLES BY FIXED LAB ANALYSIS
FORMER KIL-TONE SITE
VINELAND, NJ
Station 032

Sample Number :	FKT-032-01-C	FKT-032-04-C
ANALYTE	Result	Result
ARSENIC	12	4.1
LEAD	190	1700

All results are reported in parts per million (ppm)

SUMMARY OF ARSENIC AND LEAD RESULTS DETECTED IN SOIL SAMPLES BY FIXED LAB ANALYSIS
FORMER KIL-TONE SITE
VINELAND, NJ
Station 033

Sample Number :	FKT-033-02-B	FKT-033-04-A	FKT-033-04-E
ANALYTE	Result	Result	Result
ARSENIC	6.5	3.8	3.2
LEAD	300	520	530

All results are reported in parts per million (ppm)

SUMMARY OF ARSENIC AND LEAD RESULTS DETECTED IN SOIL SAMPLES BY FIXED LAB ANALYSIS
FORMER KIL-TONE SITE
VINELAND, NJ
Station 034

Sample Number :	FKT-034-02-A	FKT-034-02-B	FKT-034-02-C	FKT-034-02-E	FKT-034-02-F	FKT-034-04-A	FKT-034-04-C
ANALYTE	Result	Result	Result	Result	Result	Result	Result
ARSENIC	6.5	7.5	7.0	6.3	9.2	8.0	5.1
LEAD	450	910	470	459	810	320	340

All results are reported in parts per million (ppm)

SUMMARY OF ARSENIC AND LEAD RESULTS DETECTED IN SOIL SAMPLES BY FIXED LAB ANALYSIS
FORMER KIL-TONE SITE
VINELAND, NJ
Station 036

Sample Number :	FKT-036-01-A	FKT-036-01-B	FKT-036-01-C	FKT-036-01-D	FKT-036-02-A	FKT-036-02-B	FKT-036-02-C	FKT-036-02-D
ANALYTE	Result	Result	Result	Result	Result	Result	Result	Result
ARSENIC	3.1	2.8	1.9	1.4	3.3	2.6	1.4	1.0
LEAD	31	24	7.8	3.5	38	30	5.1	3.1

All results are reported in parts per million (ppm)

SUMMARY OF ARSENIC AND LEAD RESULTS DETECTED IN SOIL SAMPLES BY FIXED LAB ANALYSIS
FORMER KIL-TONE SITE
VINELAND, NJ
Station 038

Sample Number :	FKT-038-01-A	FKT-038-01-B	FKT-038-01-C	FKT-038-01-D	FKT-038-02-A	FKT-038-02-B	FKT-038-02-C	FKT-038-02-D	FKT-038-02-F
ANALYTE	Result	Result	Result	Result	Result	Result	Result	Result	Result
ARSENIC	2.0	2.2	0.97	0.66	1.3	1.2	1.3	0.99	1.1
LEAD	13	13	4.7	2.5	5.7	3.2	3.2	2.9	3.4

All results are reported in parts per million (ppm)

ATTACHMENT D

NJDEP Referral and NJDEP sample data

State of New Jersey
DEPARTMENT OF ENVIRONMENTAL PROTECTION

CHRIS CHRISTIE
Governor

KIM GUADAGNO
Lt. Governor

Publicly Funded Response Element
P.O. Box 420
5th Floor
Mail code: 401-05Q
Trenton, New Jersey 08625

BOB MARTIN
Commissioner

November 14, 2014

Walter Mugdan, Director
Emergency and Remedial Response Division
United States Environmental Protection Agency
Region II
290 Broadway
New York, New York 10007-1866

Re: Removal Action Site Submission
Former Kil-Tone Company
527 East Chestnut Street
City of Vineland, Cumberland County
NJDEP/SRP PI#648249

Dear Mr. Mugdan:

The New Jersey Department of Environmental Protection (DEP) submits the former Kil-Tone Company site and surrounding properties (LERCO and various residences) in the City of Vineland, Cumberland County for removal action consideration under the federal Comprehensive Environmental Response and Cleanup Liability Act (CERCLA). Elevated levels of arsenic and lead contamination found in soil at commercial and residential properties associated with the former Kil-Tone Company site require immediate further action to protect public health.

DEP soil sampling at and around the former Kil-Tone Company site, a former Vineland pesticide plant, in August 2014 found elevated levels of arsenic at 12 residential and commercial properties, nine of which exhibited surface (0-6") contamination above state cleanup standards. Elevated levels of lead contamination were found in soil at six residential and commercial properties, five of which also exhibited arsenic contamination. DEP conducted the site investigation work under a U.S. Environmental Protection Agency (EPA) grant at the former Kil-Tone Company site and adjacent properties. The former Kil-Tone Company site is owned by Urban Manufacturing LLC, also known as Urban Sign and Crane, which purchased the property in 2008 for the manufacturing of commercial signs.

The soil contamination found is above DEP's Site Remediation Program's residential/non-residential soil standard of 19 parts per million (based on natural background), ranging up to 90 ppm at the surface on one residential property and up to 740 ppm at the surface on the former Kil-Tone Company site. The lead ranges up to 1,100 ppm at the surface on one residential property, above DEP's Site Remediation Program's 400 ppm standard. DEP shared the sampling data from the site with the New Jersey Department of Health's (DOH) Environmental and Occupational Health Surveillance Program to evaluate health risks to residents and workers. DOH recommended that action to prevent contact with arsenic contamination at the surface of the former Kil-Tone Company site, now Urban Sign and Crane Inc., be

addressed as soon as possible because some surface soil contamination presents a cancer risk exceeding 1x10-4, along with residential properties impacted that require further evaluation and risk prevention measures.

Groundwater sampling found contamination that ranges up to 14,000 parts per billion at the water table. Public water serves the neighborhood; some commercial wells remain in operation.
In addition, sampling of Tarklin Branch located off site found the waterway is most likely impacted by arsenic discharges of the former Kil-Tone Company site.

The Kil-Tone Company operated from the late 1910s manufacturing arsenic-based pesticides until the late 1930s. A review of records by DEP found that the Kil-Tone Company was acquired by John Lucas & Company, Inc. in the mid-1920s and formed Lucas Kil-Tone Co. In about 1930, John Lucas & Company, Inc. was acquired by Sherwin Williams Co. and eventually became a wholly owned subsidiary of the Sherwin Williams Co. until it ceased operations in the 1930s. Specific compounds manufactured by Kil-Tone/Lucas Kil-Tone included copper lime calcium arsenate dust and lead arsenate.

LERCO, a fuel depot distribution facility located across the street at 520 Chestnut Ave., has been a fuel depot since the 1930s and contained several aboveground storage tanks with secondary containment. LERCO has performed remedial work on its property to address petroleum related constituents in soil and groundwater. In addition, LERCO reported elevated levels of arsenic and lead in soil and groundwater to DEP. Soil sampling at the LERCO site identified concentrations of arsenic of up to 20,500 ppm and lead up to 28,700 ppm. LERCO attributed the high arsenic and lead concentrations to the former Kil-Tone Company pesticide manufacturing operation. This information led DEP to perform the recent sampling in Vineland using federal grant funding.

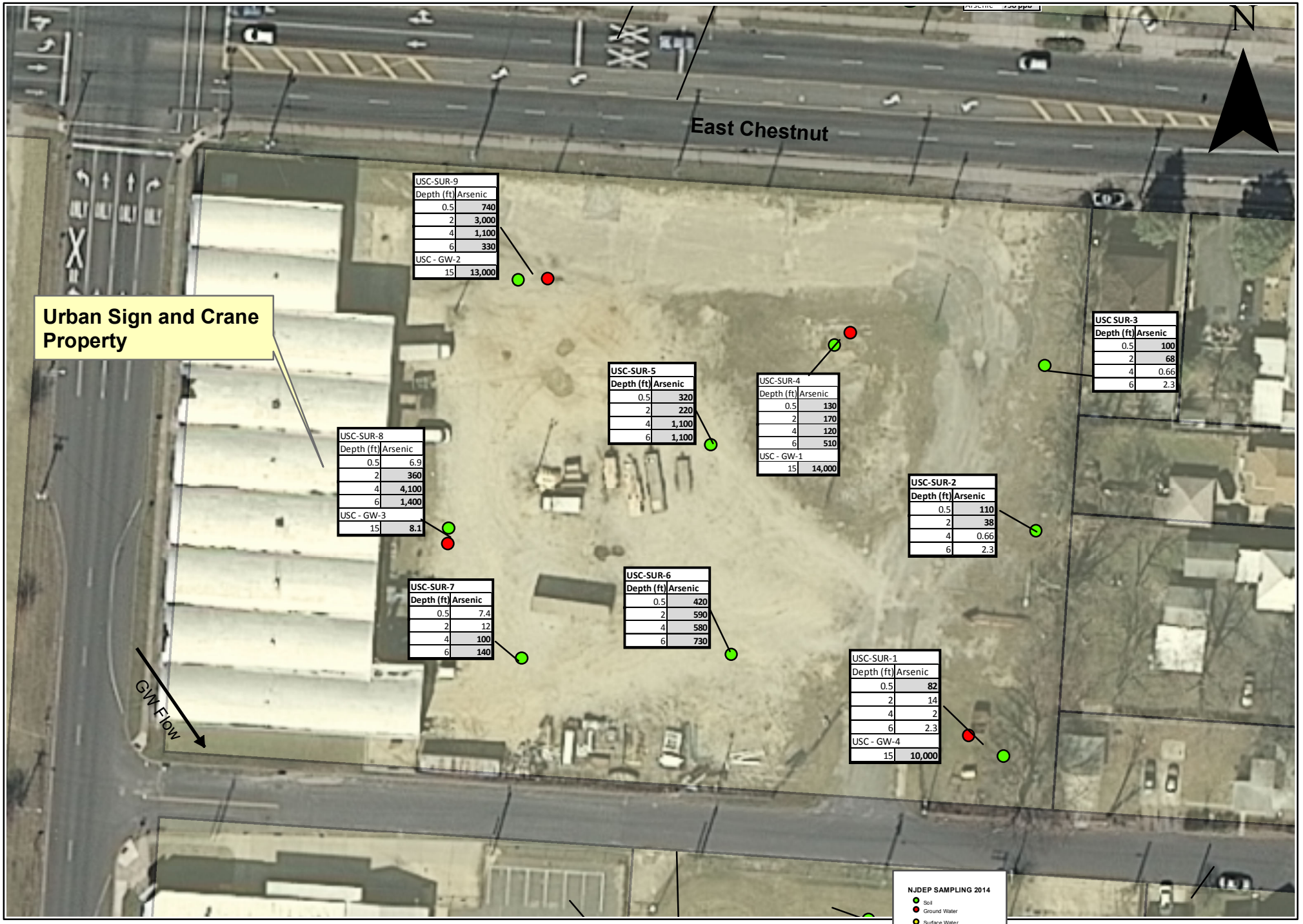
DEP supplied information about the former Kil-Tone Company site and its property owner along with potential responsible parties to your Removal Action Branch to expedite a response. If you have any questions or would like to discuss these issues in further detail, please contact me at (609) 984-9769 or Fred Mumford, Superfund coordinator in the Site Remediation Program, at (609) 530-3347.

Sincerely,

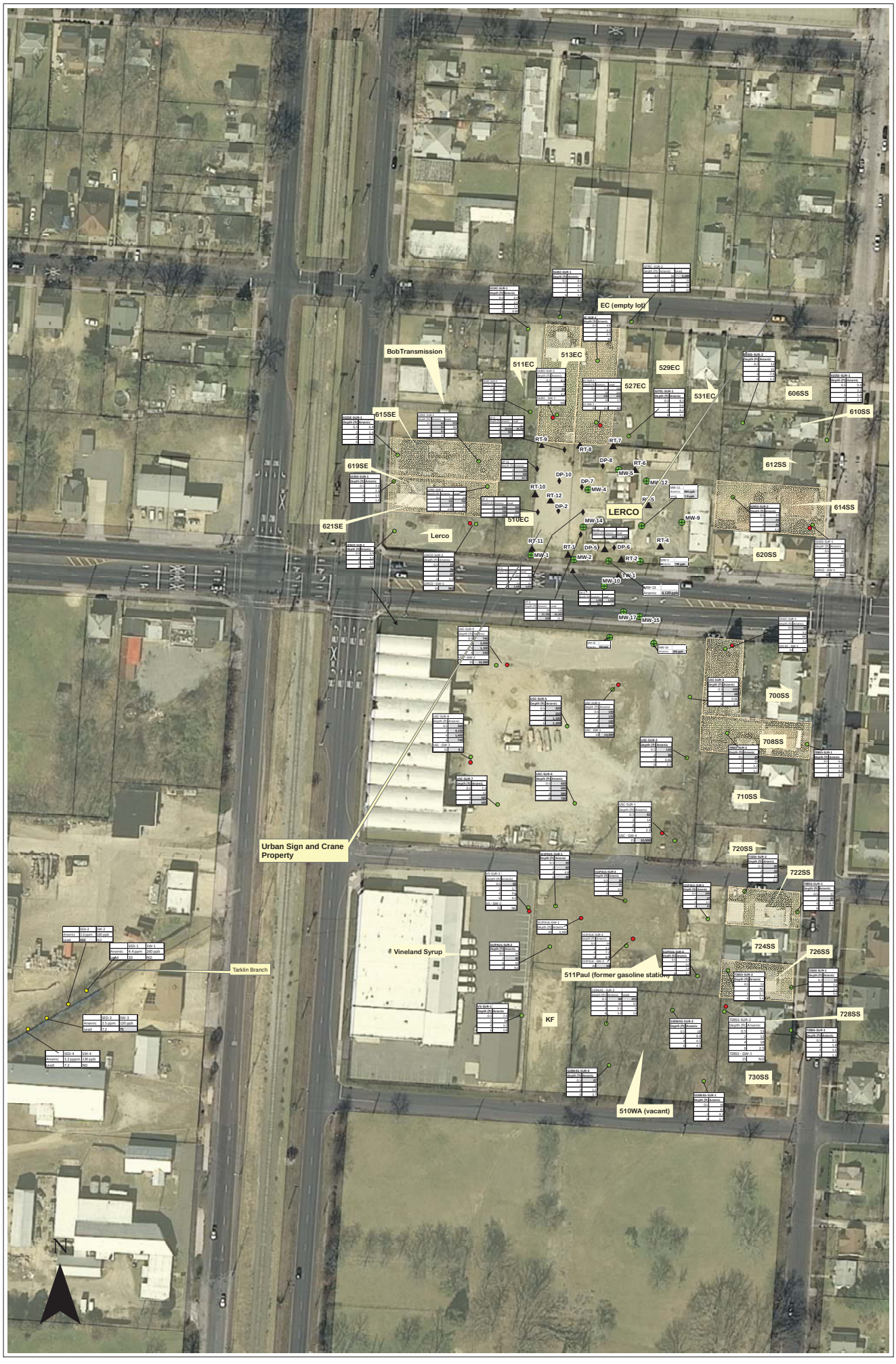
Ed Putnam
Assistant Director
Publicly Funded Response Element
Site Remediation Program

C: Mark Pedersen, Assistant Commissioner, DEP, Site Remediation Program
Ken Kloo, Director, DEP, Site Remediation Program
Fred Mumford, Section Chief, DEP, Site Remediation Program
Joseph Rotola, Branch Chief, Removal Action Branch, EPA Region II
Mel Hauptman, Section Chief, Special Projects Branch, EPA Region II

August 2014 Sampling Location Map - Urban Manufacturing LLC



Kil-Tone August 2014 Sampling Location Map



NJDEP Soil Sampling Results August 2014 Urban Sign and Crane Property, East Chestnut, Vineland					
Contaminant NJDEP RSCC / NRSCC (part per million)					
Sample ID	Depth (feet)	Arsenic 20 / 20	Copper 600 / 600	Lead 400 / 600	Antimony 14 / 340
USC-SUR-1	0 – 0.5	**82**	24	180	ND
USC-SUB-1A	1.5 - 2	14	11	44	ND
USC-SUB-1B	3.5 - 4	1.8	2.7	9.8	ND
USC-SUB-1C	5.5 - 6	2.3	4.1	8.0	ND
USC-SUR-2	0 – 0.5	**110**	88	190	ND
USC-SUB-2A	1.5 - 2	**38**	7.9	36	ND
USC-SUB-2B	3.5 - 4	0.66	ND	3.7	ND
USC-SUB-2C	5.5 - 6	2.3	3.5	7.2	ND
USC-SUR-3	0 – 0.5	**100**	62	190	ND
USC-SUB-3A	1.5 - 2	**68**	8.7	14	ND
USC-SUB-3B	3.5 - 4	ND	ND	2.4	ND
USC-SUB-3C	5.5 - 6	6.4	3.4	6.8	ND
USC-SUR-4	0 – 0.5	**130**	19	120	ND
USC-SUB-4A	1.5 - 2	**170**	31	180	ND
USC-SUB-4B	3.5 - 4	**120**	5.2	5.4	ND
USC-SUB-4C	5.5 - 6	**510**	14	9.8	ND
USC-SUR-5	0 – 0.5	**320**	97	230	ND
USC-SUB-5A	1.5 - 2	**220**	56	140	ND
USC-SUB-5B	3.5 - 4	**1,100**	4.5	84	16
USC-SUB-5C	5.5 - 6	**1,100**	6.1	6.0	4.6
USC-SUR-6	0 – 0.5	**420**	22	150	4.5
USC-SUB-6A	1.5 - 2	**590**	38	190	4.2
USC-SUB-6B	3.5 - 4	**580**	12	8.7	ND
USC-SUB-6C	5.5 - 6	**730**	11	14	ND
USC-SUR-7	0 – 0.5	7.4	7.4	4.2	ND
USC-SUB-7A	1.5 - 2	12	3.0	11	ND
USC-SUB-7B	3.5 - 4	**100**	9.2	47	ND
USC-SUB-7C	5.5 - 6	**140**	6.6	14	ND
USC-SUR-8	0 – 0.5	6.9	2.1	5.6	ND
USC-SUB-8A	1.5 - 2	**360**	83	410	ND
USC-SUB-8B	3.5 - 4	**4,100**	64	**2,300**	5.2
USC-SUB-8C	5.5 - 6	**1,400**	14	6.5	ND
USC-SUR-9	0 – 0.5	**740**	520	370	2.5
USC-SUB-9A	1.5 - 2	**3,000**	**970**	**3,100**	**17**
USC-SUB-9B	3.5 - 4	**1,100**	22	59	2.7
USC-SUB-9C	5.5 - 6	**330**	23	7.8	ND

NJDEP Soil Sampling Results August 2014 Urban Sign and Crane Property, East Chestnut, Vineland					
Contaminant NJDEP RSCC / NRSCC (part per million)					
Sample ID	Depth (feet)	Arsenic	Copper	Lead	Antimony
		20 / 20	600 / 600	400 / 600	14 / 340
USC-SUB-12A	DUP	7.2	4.2	7.3	ND
USC-SUB -12B	DUP	5,800	100	3,600	6.3
Groundwater Sample Results (Filtered Samples)					
		GWQS (part per billion)			
		3	1,300	5	6
USC-GW-1	12-15	14,000	ND	ND	ND
USC-GW-2	12-15	13,000	ND	ND	ND
USC-GW-3	12-15	8.1	ND	ND	ND
USC-GW-4	12-15	10,000	ND	ND	ND
USC-GW-5	12-15	12,000	ND	ND	ND

NJDEP Soil Sampling Results August 2014 722 to 730 South Sixth Street, Washington and Paul Streets Properties located 1 block South of Urban Sign and Crane					
Sample ID	**Depth (feet)**	**Contaminant NJDEP RSCC / NRSCC (part per million)**			
		Arsenic	**Barium**	**Copper**	**Lead**
		20 / 20	**700 / 47,000**	**600 / 600**	**400 / 600**
Residence @ 722 South 6th Street					
722SS-SUR-1	0 – 0.5	17	30	7.7	82
722SS-SUB-1A	1.5 - 2	37	29	12	75
722SS-SUB-1B	3.5 - 4	3.7	32	4.4	13
722SS-SUB-1C	5.5 - 6	3.0	14	3.9	6.7
722SS-SUR-2	0 – 0.5	49	77	24	190
722SS-SUB-2A	1.5 - 2	23	45	7.2	41
722SS-SUB-2B	3.5 - 4	13	36	6.6	21
722SS-SUB-2C	5.5 - 6	3.5	19	6.8	11
Residence @726 South 6th Street					
726SS-SUR-1	0 – 0.5	23	30	8.9	73
726SS-SUB-1A	1.5 - 2	7.5	20	4.0	15
726SS-SUB-1B	3.5 - 4	2.4	9.9	2.9	4.4
726SS-SUB-1C	5.5 - 6	3.4	17	4.7	7.8
726SS-SUR-2	0 – 0.5	13	600	21	260
726SS-SUB-2A	1.5 - 2	??			
726SS-SUB-2B	3.5 - 4	5.7	26	4.5	7.2
726SS-SUB-2C	5.5 - 6	5.6	27	6.8	16
Residence @728 South 6th Street					
728SS-SUR-1	0 – 0.5	9.1	17	4.6	31
728SS-SUB-1A	1.5 - 2	1.8		2.0	4.0
728SS-SUB-1B	3.5 - 4	1.6		1.6	3.2
728SS-SUB-1C	5.5 - 6	1.3	12	2.2	4.7
728SS-SUR-2	0 – 0.5	13	43	14	100
728SS-SUB-2A	1.5 - 2	12	47	15	100
728SS-SUB-2B	3.5 - 4	18	90	14	42
728SS-SUB-2C	5.5 - 6	2.5	14	3.9	9.0
728SS-GW-1	12-15	ND			
Undeveloped Lot @ 510 Washington Street					
510WA-SUR-1	0 – 0.5	18	19	5.4	26
510WA-SUB-1A	1.5 - 2	10	24	3.9	5.9
510WA-SUB-1B	3.5 - 4	4.3	18	5.2	7.0
510WA-SUB-1C	5.5 - 6	2.7	14	4.2	7.7
510WA-SUR-2	0 – 0.5	18	27	8.6	59

NJDEP Soil Sampling Results August 2014 722 to 730 South Sixth Street, Washington and Paul Streets Properties located 1 block South of Urban Sign and Crane					
Sample ID	**Depth (feet)**	**Contaminant NJDEP RSCC / NRSCC (part per million)**			
		Arsenic	**Barium**	**Copper**	**Lead**
		20 / 20	**700 / 47,000**	**600 / 600**	**400 / 600**
510WA-SUB-2A	1.5 - 2	9.9	16	2.0	4.1
510WA-SUB-2B	3.5 - 4	4.5	21	4.9	6.1
510WA-SUB-2C	5.5 - 6	4.5	19	5.0	5.7
510WA-SUR-3	0 – 0.5	**39**	160	22	**470**
510WA-SUB-3A	1.5 - 2	16	27	4.1	55
510WA-SUB-3B	3.5 - 4	3.3		2.4	5.0
510WA-SUB-3C	5.5 - 6	3.3	13	5.3	13
510WA-SUR-4	0 – 0.5	**37**	41	12	160
510WA-SUB-4A	1.5 - 2	2.0	13	1.5	14
510WA-SUB-4B	3.5 - 4	1.5		1.7	3.8
510WA-SUB-4C	5.5 - 6	3.7	21	5.1	28
Vineland Syrup Facility					
VS-SUR-1	0 – 0.5	7.3	11	6.5	9.7
VS-SUB-1A	1.5 - 2	12	27	11	56
VS-SUB-1B	3.5 - 4	3.2	12	4.5	8.8
VS-SUB-1C	5.5 - 6	1.8		3.2	9.9
VS -SUR-2	0 – 0.5	**50**	25	4.7	7.5
VS-SUB-2A	1.5 - 2	1.7	15	3.3	8.0
VS-SUB-2B	3.5 - 4	4.6	17	5.1	8.0
VS-SUB-2C	5.5 - 6	4.2	14	6.5	6.7
VS-GW-1	12 – 15	ND			
Former Gasoline Station, 511 Paul Street (active cleanup)					
511PAUL-SUR-1	0 – 0.5	**40**	19	12	80
511PAUL-SUB-1A	1.5 - 2	**80**	24	5.0	17
511PAUL-SUB-1B	3.5 - 4	4.8	16	4.2	6.6
511PAUL-SUB-1C	5.5 - 6	**38**		2.1	3.3
511PAUL-SUR-2	0 – 0.5	14	32	13	83
511PAUL-SUB-2A	1.5 - 2	**20**	150	28	190
511PAUL-SUB-2B	3.5 - 4	13	14	3.5	18
511PAUL-SUB-2C	5.5 - 6	9.6	15	5.3	19
511PAUL-SUR-3	0 – 0.5	**25**	20	6.3	67
511PAUL-SUB-3A	1.5 - 2	21	47	13	38
511PAUL-SUB-3B	3.5 - 4	4.3		4.5	4.4
511PAUL-SUB-3C	5.5 - 6	16	14	4.6	9.7
511PAUL-SUR-4	0 – 0.5	19	32	6.2	20
511PAUL-SUB-4A	1.5 - 2	2.6		2.5	5.5

NJDEP Soil Sampling Results August 2014 722 to 730 South Sixth Street, Washington and Paul Streets Properties located 1 block South of Urban Sign and Crane					
Sample ID	**Depth (feet)**	**Contaminant NJDEP RSCC / NRSCC (part per million)**			
		Arsenic	**Barium**	**Copper**	**Lead**
		20 / 20	**700 / 47,000**	**600 / 600**	**400 / 600**
511PAUL-SUB-4B	3.5 - 4	7.2	35	5.8	17
511PAUL-SUB-4C	5.5 - 6	6.9		5.2	8.3
511PAUL-SUR-5	0 – 0.5	**200**	39	21	100
511PAUL-SUB-5A	1.5 - 2	**27**	26	3.8	13
511PAUL-SUB-5B	3.5 - 4	3.1	13	2.7	5.0
511PAUL-SUB-5C	5.5 - 6	22	11	3.5	13
511PAUL-SUR-6	0 – 0.5	4.9	22	4.4	6.0
511PAUL-SUB-6A	1.5 - 2	3.0	15	4.5	7.1
511PAUL-SUB-6B	3.5 - 4	1.6		1.9	3.9
511PAUL-SUB-6C	5.5 - 6	2.7	16	4.8	6.9
511PAUL-GW-1	12 – 15	**3,100**			
511PAUL-GW-2	12 - 15	**50**			

NJDEP Soil Sampling Results August 2014 531 East Chestnut and 700 to 720 South Sixth Street Properties Adjacent to Eastern Property Boundary of Urban Sign and Crane						
Sample ID	**Depth (feet)**	**Contaminant NJDEP RSCC / NRSCC**				
		Arsenic	**Barium**	**Copper**	**Lead**	**Antimony**
		20 / 20	**700 / 47,000**	**600 / 600**	**400 / 600**	**14 / 340**
531 East Chestnut Street						
531EC-SUR-1	0 – 0.5	**21**	51	22	160	2.2
531EC -SUB-1A	1.5 - 2	5.3		3.3	9.5	
531EC -SUB-1B	3.5 - 4			1.5	2.9	
531EC -SUB-1C	5.5 - 6	2.2	15	4.3	11	
531EC-GW-1	12 - 15	ND				
708 South 6th Street						
708SS-SUR-1	0 – 0.5	6.4	23	9.0	46	
708SS-SUB-1A	1.5 - 2	3.7	30	4.6	15	
708SS-SUB-1B	3.5 - 4	6.2	25	6.5	58	
708SS-SUB-1C	5.5 - 6	2.9	15	4.8	6.9	
708SS-SUR-2	0 – 0.5	**39**	66	29	230	
708SS-SUB-2A	1.5 - 2	12	35	9.2	30	
708SS-SUB-2B	3.5 - 4	2.2		2.2	8.0	
708SS-SUB-2C	5.5 - 6	1.1		1.8	4.4	

NJDEP Soil Sampling Results August 2014 600 block of SouthEast Avenue, 500 Block of East Cherry Street and 600 block of South Sixth Street Properties located 1 block Nort of Urban Sign and Crane					
Sample ID	**Depth (feet)**	**Contaminant NJDEP RSCC / NRSCC (part per million)**			
		Arsenic	**Barium**	**Copper**	**Lead**
		20 / 20	**700 / 47,000**	**600 / 600**	**400 / 600**
LERCO property @ Corner of SouthEast Street and East Chestnut					
LERCO-SUR-1	0 – 0.5	4.9	42	7.2	65
LERCO-SUB-1A	1.5 - 2	1.4	27	1.7	5.4
LERCO-SUB-1B	3.5 - 4	1.2		1.3	3.0
LERCO-SUB-1C	5.5 - 6			0.91	2.6
LERCO-SUR-2	0 – 0.5	**23**	33	17	130
LERCO-SUB-2A	1.5 - 2	**36**	61	40	160
LERCO-SUB-2B	3.5 - 4	**22**	47	17	87
LERCO-SUB-2C	5.5 - 6	1.0		1.7	3.7
LERCO–GW-1	12 - 15	**960**			
Residence @ 619 SouthEast Avenue					
619SE-SUR-1	0 – 0.5	7.3	50	16	170
619SE-SUB-1A	1.5 - 2	2.2	26	11	38
619SE-SUB-1B	3.5 - 4	1.5	13	1.7	3.3
619SE-SUB-1C	5.5 - 6	1.4		2.2	7.5
619SE-SUR-2	0 – 0.5	7.8	25	5.8	29
619SE-SUB-2A	1.5 - 2	**120**	81	48	**750**
619SE-SUB-2B	3.5 - 4	**43**	45	12	44
619SE-SUB-2C	5.5 - 6	0.94		1.2	1.7
Residence @ 615 SouthEast Avenue					
615SE-SUR-1	0 – 0.5	6.9	75	7.6	280
615SE-SUB-1A	1.5 - 2	1.4	21	1.7	16
615SE-SUB-1B	3.5 - 4	1.7	22	2.1	27
615SE-SUB-1C	5.5 - 6	1.3		2.2	3.0
615SE-SUR-2	0 – 0.5	**83**	170	38	**570**
615SE-SUB-2A	1.5 - 2	**95**	110	29	360
615SE-SUB-2B	3.5 - 4	**31**	19	3.5	31
615SE-SUB-2C	5.5 - 6	14	11	3.0	16
615SE-SUR-3	0 – 0.5	**90**	180	40	**530**
Residence @ 511 East Cherry Street					
511EC-SUR-1	0 – 0.5	6.9	29	12	90
511EC-SUB-1A	1.5 - 2	2.4	25	6.3	52
511EC-SUB-1B	3.5 - 4	1.1	30	2.2	12

NJDEP Soil Sampling Results August 2014 600 block of SouthEast Avenue, 500 Block of East Cherry Street and 600 block of South Sixth Street Properties located 1 block Nort of Urban Sign and Crane					
Sample ID	**Depth (feet)**	**Contaminant NJDEP RSCC / NRSCC (part per million)**			
		Arsenic	**Barium**	**Copper**	**Lead**
		20 / 20	**700 / 47,000**	**600 / 600**	**400 / 600**
511EC-SUB-1C	5.5 - 6	0.99	11	1.2	2.1
511EC-SUR-2	0 – 0.5	16	150	15	31
511EC-SUB-2A	1.5 - 2	17	30	5.8	16
511EC-SUB-2B	3.5 - 4	2.1	14	1.9	4.1
511EC-SUB-2C	5.5 - 6	2.8	25	3.2	8.2
Residence @ 513 East Cherry Street					
513EC-SUR-1	0 – 0.5	8.4	32	13	97
513EC-SUB-1A	1.5 - 2	6.5	240	16	120
513EC-SUB-1B	3.5 - 4	6.7	67	14	91
513EC-SUB-1C	5.5 - 6	1.4	11	2.6	3.7
513EC-SUR-2	0 – 0.5	8.6	220	42	270
513EC-SUB-2A	1.5 - 2	8.4	44	10	96
513EC-SUB-2B	3.5 - 4	**23**	30	3.1	9.9
513EC-SUB-2C	5.5 - 6	2.2		1.3	1.9
513EC-GW-1	12 – 15	ND			
Empty Lot @ East Cherry Street					
EC-SUR-1	0 – 0.5	4.9	29	7.9	51
EC-SUB-1A	1.5 - 2	6.3	27	7.2	24
EC-SUB-1B	3.5 - 4	3.7	25	5.4	13
EC-SUB-1C	5.5 - 6	15	26	5.4	19
EC-SUR-2	0 – 0.5	7.2	62	130	130
EC-SUB-2A	1.5 - 2	18	130	140	220
EC-SUB-2B	3.5 - 4	**100**	50	22	**410**
EC-SUB-2C	5.5 - 6	10	12	1.6	3.7
EC-GW-1	12 – 15	8.4			
Residence @ 527 East Cherry Street					
527EC-SUR-1	0 – 0.5	8.5	45	28	130
527EC-SUB-1A	1.5 - 2	6.6	25	5.8	19
527EC-SUB-1B	3.5 - 4	6.2	25	3.2	10
527EC-SUB-1C	5.5 - 6	1.1	14	2.0	4.5
527EC-SUR-2	0 – 0.5	16	35	14	**1,100**
527EC-SUB-2A	1.5 - 2	12	49	15	77
527EC-SUB-2B	3.5 - 4	18	120	63	70
527EC-SUB-2C	5.5 - 6	1.1	44	4.1	22
527EC-SUB-3A	1.5 - 2	7.3	33	7.5	23

NJDEP Soil Sampling Results August 2014 600 block of SouthEast Avenue, 500 Block of East Cherry Street and 600 block of South Sixth Street Properties located 1 block Nort of Urban Sign and Crane					
Sample ID	**Depth (feet)**	**Contaminant NJDEP RSCC / NRSCC (part per million)**			
		Arsenic	**Barium**	**Copper**	**Lead**
		20 / 20	**700 / 47,000**	**600 / 600**	**400 / 600**
Residence @ 610 South 6th Street					
610SS-SUR-1	0 – 0.5	9.4	40	6.8	78
610SS-SUB-1A	1.5 - 2	3.2	39	6.0	73
610SS-SUB-1B	3.5 - 4	1.4	31	3.1	21
610SS-SUB-1C	5.5 - 6	2.1		2.5	5.4
610SS-SUR-2	0 – 0.5	13	110	27	300
610SS-SUB-2A	1.5 - 2	15	120	27	320
610SS-SUB-2B	3.5 - 4	7.9	43	7.9	73
610SS-SUB-2C	5.5 - 6	1.2		1.6	3.5
Residence @ 614 South 6th Street					
614SS-SUR-1	0 – 0.5	16	90	20	120
614SS-SUB-1A	1.5 - 2	2.9	15	4.6	6.3
614SS-SUB-1B	3.5 - 4	1.9	26	3.3	12
614SS-SUB-1C	5.5 - 6	0.84	10	1.2	5.5
614SS-SUR-2	0 – 0.5	19	70	32	170
614SS-SUB-2A	1.5 - 2	44	21	11	33
614SS-SUB-2B	3.5 - 4	45	45	13	66
614SS-SUB-2C	5.5 - 6	4.6	19	2.9	8.0
614SS-GW-1	12 – 15	ND			

DO NOT PLACE IN ADMINISTRATIVE RECORD
DO NOT RELEASE TO THE PUBLIC

ATTACHMENT E

Confidential Independent Government Cost Estimate